

CANADA  
DEPARTMENT OF MINES AND RESOURCES

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MINES AND GEOLOGY BRANCH

---

NATIONAL MUSEUM OF CANADA

BULLETIN No. 102

BIOLOGICAL SERIES No. 31

CATALOGUE OF CANADIAN RECENT MAMMALS

BY

Rudolph Martin Anderson



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OTTAWA  
EDMOND CLOUTIER, C.M.G., B.A., L.Ph.,  
KING'S PRINTER AND CONTROLLER OF STATIONERY  
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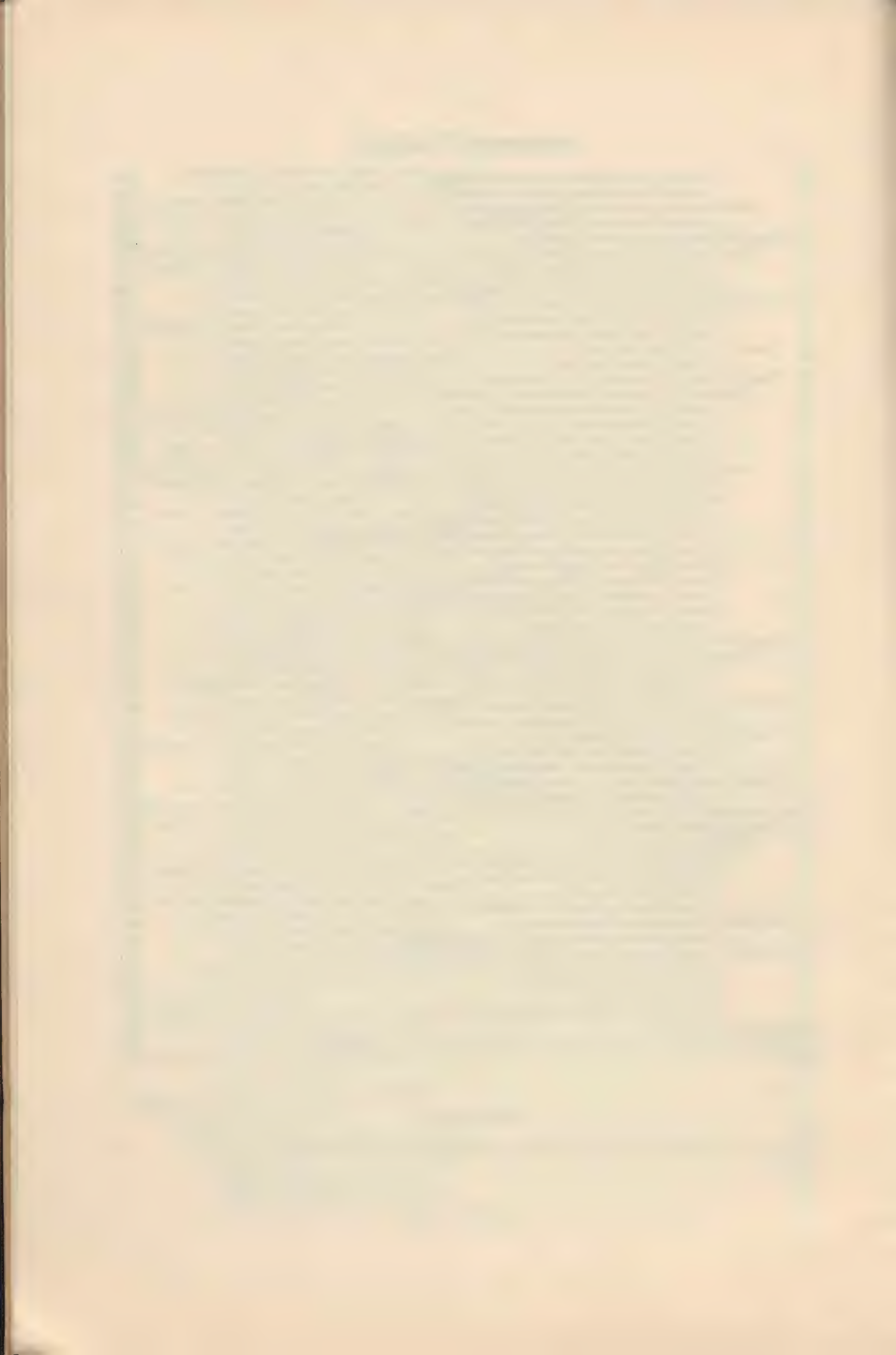
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# CATALOGUE OF CANADIAN RECENT MAMMALS

## INTRODUCTION

The object of this bulletin is to give a distributional list of the different forms of mammals that are known to exist, or to have existed within historic time, north of the southern boundaries of the Dominion of Canada, with exception of Alaska. Newfoundland is included because there are many mammalian records from Labrador (formerly known as Ungava), and most of these mammals are without doubt found in the hinterland of eastern Quebec or in the North Atlantic Ocean in that latitude. The fauna of the island of Newfoundland also contains some mammals that are only slightly differentiated insular forms of Canadian mainland species. The mammals of Greenland are included because its few species all belong to circumpolar groups, most of which are common to the neighbouring shores of Ellesmere Island and adjacent islands of the Canadian Arctic Archipelago, and all of the Greenland forms are closely related to Canadian arctic species.

The distribution of mammalian species depends primarily upon available food and shelter, following physiographic rather than political boundaries, and is closely connected with the dominant plant life of the different areas, depending in turn upon soil, temperature, and humidity. In delimiting the range of a mammal it is frequently useful to combine the well-known political boundaries with reference to life zones, as shown on the accompanying map.

Broadly, the more settled southern parts of Canada are mostly in the Transition zone of the austral region, the mixed, largely deciduous forested part east of the 100th meridian being commonly called the Alleghenian zone, and the western prairie section the Campestrian zone. South of this is a small area of the humid Carolinian zone in extreme southern Ontario, and small areas of semi-arid Upper Sonoran zone in parts of southern Saskatchewan, Alberta, and British Columbia. North of the Transition zone is the broad belt of coniferous forest known as the Canadian zone. North of the Canadian zone lies the so-called Hudsonian zone, which is really a transition zone of mossy muskeg, grassy plains, and rocky hills, with areas of thin, stunted and scattered forest growth that merges into the treeless rock and tundra of the Arctic zone. For detailed discussion of life zones, *See* Anderson (1924, 1934, 1937, 1938).<sup>1</sup>

For many years there has been a demand for a complete list of the mammals found in Canada. The advances in zoological research throughout the whole of North America during recent years have brought to light many new forms and enormously extended the known range of many forms already described. The extent of this increase is shown by the fact that Desmarest (*Mammalogie*, vol. 1, 1820), who professed to describe all the known species of mammals, limited the number inhabiting North America to 100 species. In 1825 Harlan<sup>2</sup> listed 147 species in North America, of which 38 were Cetaceans. About 25 years later Audubon and Bachman<sup>3</sup> listed 42 genera and 207 species and varieties. In 1885 True<sup>4</sup> listed 363 forms, less by over one hundred than the number recognized today in the Dominion of Canada alone. By 1900 the number had

<sup>1</sup> Anderson, R. M.: The Present Status and Future Prospects of the Larger Mammals of Canada, *Brit. Ass. Adv. Sci.*, Toronto meeting, 1924, *Scot. Geogr. Mag.*, vol. 40, pp. 321-331 (Nov. 1924); The Distribution, Abundance and Economic Importance of the Game and Fur-bearing Mammals of Western North America, *Proc. Fifth Pac. Sci. Congr.*, Vancouver meeting, 1933, pp. 4055-4075, 17 maps, Univ. Toronto Press (1934); Faunas of Canada, in *Canada Year Book* 1937, Dom. Bur. Statistics (section on life zones of Canada, pp. 33-42); *ibid.*, in *L'Annuaire du Canada*, 1937, pp. 9-19; The Present Status and Distribution of the Big Game Mammals of Canada, *Trans. Third North Amer. Wildlife Conference*, Baltimore, 1938, pp. 390-406, 11 maps (1938).

<sup>2</sup> *Fauna Americana: Being a Description of the Mammiferous Animals Inhabiting North America*; Philadelphia, 1825, pp. 320.

<sup>3</sup> *The Quadrupeds of North America*; New York, 1849-1851, 3 vols.

<sup>4</sup> A Provisional List of the Mammals of North America and the West Indian Islands; *Proc. U.S. Nat. Mus.*, vol. 7 (1884), pp. 587-614, appendix, 1885.



been increased to about 1,450, by Miller and Rehn<sup>1</sup>, and in 1911 the species of land mammals in the U.S. National Museum alone were numbered by Miller<sup>2</sup> at 2,138 forms. A later revised list by Miller<sup>3</sup> recognized 2,554 forms. The



Figure 1. Life zones in the northern part of the North American continent.

latter list is not strictly comparable with his 1911 list as it includes 45 species of Cetaceans and the field is widened to cover the entire continent of North America from Panama northward, also Greenland, the Greater Antilles, and the Lesser Antilles south to Granada. Nevertheless, in 12 years an increase of 371 was shown in the number of land mammals alone. Canada, covering half of the continent of North America, bulks largely in these records of species and types.

<sup>1</sup>Systematic Results of the Study of North American Land Mammals to the Close of the Year 1900; Proc. Boston Soc. Nat. Hist., vol. 30, pp. 352 (December 27, 1901).

<sup>2</sup>List of North American Land Mammals in the U.S. National Museum, 1911; Smith. Inst., U.S. Nat. Mus., Bull. 79, by Gerrit S. Miller, Jr., Curator, Division of Mammals, U.S. Nat. Mus., Washington, 1914, pp. 455 (Dec. 31, 1912).

<sup>3</sup>List of North American Recent Mammals 1923, by Gerrit S. Miller, Jr.; Smith. Inst., U.S. Nat. Mus., Bull. 128, Washington, 1924, pp. 674 (Dec. 31, 1924).



Of the thirteen orders of Mammalia recorded from North America, including sixty-four families, ten orders and thirty-five families are found in Canada and its adjacent seas. The three North American orders not found in Canada are *Perissodactyla* (tapirs), *Xenartha* (sloths, anteaters, and armadillos), and *Sirenia* (sea-cows). Several families of tropical and subtropical Chiroptera (bats), Rodentia (rodents), and Primates (New World monkeys) are not represented in the Canadian fauna.

The advance of exploration and the intensive work of modern field naturalists and the opportunities offered for detailed laboratory studies of old material in comparison with the new material that is constantly coming in to some of our more active museums, have resulted in the differentiation and description of new specific and subspecific forms far beyond the imagination of the older systematists. The writer does not hold that all such descriptive subdivision has been a net gain to science. Without doubt many new forms have been separated on grounds that have later been proved untenable. Species have often been described from immature or non-typical specimens with lack of sufficient material for comparison, or on account of under-estimation of the range of individual variation in animal populations, but with the steady advance of critical modern monographic work, access to larger series of specimens from intermediate regions, and deeper knowledge of morphological characters, former alleged species have been reduced to subspecific or varietal standing or relegated to synonymy.<sup>1</sup> Thus, the regional lists of mammals are being continually revised both by addition and subtraction, and by stricter application of the rules of scientific nomenclature scientific names are becoming stabilized. This does not mean an absolute simplification of taxonomy.<sup>2</sup> The problems of biology are intricate and difficult and the advanced student of ecology, adaptation to environment, variation in a state of nature, geographical distribution both horizontal and altitudinal, and diverse evolutionary problems may find it convenient and necessary to have names for slightly differentiated forms like subspecies that may not be easily recognizable by the beginner. For the latter the specific name will generally suffice. "A name is a name" for convenience in recognition and does not necessarily imply any idea of relations. For that reason the specific or species name of any "kind" of animal should remain definite and stable. Rearrangement of the orders and families or sequence of species and of higher groups reflects changing opinions as to the relationship of different forms to each other.

Stiles (*loc. cit.*, 1927, pp. 194-199) quotes with approval Raphael Blanchard's definition of nomenclature as "the grammar of science", and states that individual zoologists have a nomenclatorial vocabulary varying from about two hundred names to about two thousand, and the vocabulary of the entire profession runs into hundreds of thousands. It being reasonable to hold in view the important principle that it is the vocabulary of the profession—not of the individual—that should govern our principles and practices, he holds, as a professional parasitologist, that considering solely the names of the parasites and overlooking the importance of the names of the hosts that harbour these parasites will soon result in reaching a status of theoretical confusion. The importance of having definitely and unequivocally recorded the name of any particular species of

<sup>1</sup>"A homonym is one and the same name for two or more different things. Synonyms are different names for one and the same thing."—Footnote 1, Article 35, The International Rules of Zoological Nomenclature with Appendix and Summaries of Opinions Nos. 1 to 56. Extracted from the Proceedings of the Ninth International Zoological Congress, Monaco, 1913. Published by T. C. Smallwood, 3216 N Street, Washington, D.C., September 1915. The original was published under the title "Règles Internationales de la Nomenclature Zoologique Adoptée par les Congrès Internationaux de Zoologie," in *Revue Critique de Paléozoologie*, July and October 1914. Reprinted in Proceedings of the Biological Society of Washington, vol. 39, July 30, 1926, pp. 75-104. See also C. W. Stiles: "Underlying Factors in the Confusion of Zoological Nomenclature, with a Definite Practical Suggestion for the Future"; *Science*, vol. 55, No. 1678, Feb. 25, 1927, pp. 194-199.

<sup>2</sup>"Taxonomy—The department of science that embodies the principles of classification. . . . especially the branch of biology that treats of the systematic classification of organisms, or of morphological facts." *Standard Dictionary*, 1907.



mammal, bird, fish, or insect that can carry an infection transmissible to man and of possible importance to the health and life of human beings and domestic animals is obvious. The editor of the *Journal of Mammalogy* (vol. 9, May 1928, p. 179) calls attention to taxonomic blunders in recent genetic and ecological contributions, stating that "Investigational results in anatomy, embryology, ecology, or any of the biological sciences, have little, if any, true scientific worth unless the identification of the species involved is accurate."

As the writer stated in a former paper,<sup>1</sup> "It is, of course, well recognized that species closely resembling each other often have quite different habits, and to avoid misapprehension and confusion of records we must have a certain amount of systematic taxonomic study before detailed investigations can be made along other lines. Valuable observations may be made without drawing the lines of differentiation too finely, but in general, we must learn the names of our animals before we can write about them. In other words, we must have pegs on which to hang our observations, if they are to be of value."

Although a technical description of some slightly different "race" or "population" within the range of a species may not necessarily be of interest or use to the amateur or casual field naturalist, such variations are of value to genetic studies, bringing attention to local differences that are generally presumed to result from environment, climatic conditions, humidity, aridity, soil conditions, and vegetation available for food. These studies may provide clues and data for future research workers on the effects of environment and natural selection, and aid in the interpretation of underlying causes that are imperfectly understood at the present time. As David Starr Jordan wrote in 1926<sup>2</sup>:

"The trouble is therefore not with our system of nomenclature but with nature itself, so prolific with forms of life in comparison with the number of us seriously interested in trying to find out what really exists. Nor is it possible, or in any way desirable, to drop our recognition of the 140,000 'more or less current generic names' to return to the meaningless pigeon holes into which species were carelessly dropped by the early authors who had never dreamed that evolution and taxonomy would ultimately be one and the same."

As an aid to this work, the present paper is a contribution. Several formal or technical lists and various popular books on North American mammals as a whole or in groups have been published, including large sections dealing with Canadian mammals, but no catalogue of Canadian mammals as a whole has appeared since 1888, when J. B. Tyrrell compiled a list of 123 species, briefly annotated.<sup>3</sup> Some provincial and territorial lists of mammals have been published: *Les Mammifères de la Province de Québec*, Dionne, 1902; *The Mammals of Ontario*, Cross and Dymond, 1929; *Mammals of Eastern Arctic and Hudson Bay*, Anderson, 1934; *Manual of Vertebrates of Manitoba*, Jackson, 1934; *Mammals and Birds of Western Arctic District, N.W.T.*, Anderson, 1937; *Mammals of Québec*, Anderson, 1939, with later additions; *The Land Mammals of Nova Scotia*, R. W. Smith, 1940; *Mammals of Southern Part of Alaska Highway*, Rand, 1944; *Mammals of Canol Road*, Rand, 1945; *Mammals of Yukon*, Rand, 1945; and various local or regional lists. Otherwise, Canadian students and others who have wished to obtain the names and ranges of the species of mammals found in Canada have been obliged to pick them out of a mass of scattered literature, the most important of which has been the series entitled *North American Fauna*, the first number appearing in 1889 as a publication of the U.S. Department of Agriculture, Division of Ornithology and Mammalogy, and continuing in later years under the Bureau of the Biological

<sup>1</sup>Field Study of Life Histories of Canadian Mammals; *Can. Field-Nat.*, vol. 33, No. 5, November 1919, p. 87.

<sup>2</sup>Scientific Names and Their Convenience; *Science*, vol. 64, No. 1667, pp. 575-576.

<sup>3</sup>The Mammalia of Canada, by J. B. Tyrrell, B.A., F.G.S., Field-Geologist of the Geological and Natural History Survey of Canada. Read before the Canadian Institute April 7, 1888. Published in advance of the Proceedings by permission of the Council. Toronto: The Copp, Clark Company, Ltd., General Printers, Colborne Street, 1888. pp. 1-28.



Survey of the same Department, later known as Fish and Wildlife Service, Department of the Interior, Washington, the latest number being No. 57, 1941. These reports are indispensable to anyone attempting to do serious systematic work on Canadian mammals. Although much systematic work has been done in most of the groups within recent years, many important families and genera have not been thoroughly monographed within the past 40 years. Even where large libraries are available, the data regarding many groups of mammals still remain under a mass of conflicting and obsolete nomenclature, and additions and revisions are rarely found except in the pages of technical periodicals.

Although much field work has been done on the mammals of Canada, comparatively few types of recent mammals are to be found in Canadian museums or other collections. Many of the species named in early times were described from specimens in European collections, and in later years much new material was brought to light by numerous correspondents and field workers for the Smithsonian Institution, the United States National Museum, the Biological Survey of the U.S. Department of Agriculture, state, university, and large city museums that realized that systematic comparative work on North American zoology demanded material from the whole continent. The ranges of animals and plants follow physiographic rather than political boundaries. These institutions have also endeavoured to obtain series of topotypes,<sup>1</sup> which in the absence of the actual type specimen are invaluable in the critical determination of specimens. It is to be hoped that the collectors and students of mammalogy in Canada will consult the list of type localities in each province, in appendix of this volume, and when visiting type localities help the progress of the science of mammalogy in Canada by collecting topotypes for the national reference collection, or by putting on record information as to the location of such topotypes.

The writer has followed Miller's usage of 1924 (op. cit.), including all species and subspecies that have been described and not questioned in a recent monographic work where pertinent synonymy and references may be consulted. The arrangement and sequence of genera in this list are mostly the same as those used by Miller (1924), whose treatment of the higher groups is essentially based on Osborn's classification,<sup>2</sup> beginning with the most primitive or least specialized groups and ending with those that show the highest total of specialization.<sup>3</sup>

The writer has followed Glover M. Allen<sup>4, 5</sup> in changing the sequence of orders to what he considers a more natural arrangement by placing the order Primates following the Insectivora (1939, op. cit., p. 279); the order Cetacea following the Pinnipedia<sup>6</sup>; by treating the lagomorphs as a suborder, *Duplicidentata*, of the order Rodentia; and rearranging the families of the order Carnivora.

<sup>1</sup>The *type*, otherwise known as *eutype* or *holotype*, is a single specimen selected by the author of a species as its type, or the only specimen known at the time of description. A *topotype* is a specimen from the original locality. Many other names are in use for certain classes of identified specimens. See Entomological Code, by Banks and Caudell, Washington, D.C., May 1912, pp. 14-15.

<sup>2</sup>Outline Classification of the Mammalia Recent and Extinct. Appendix, pp. 511-563, in *The Age of Mammals in Europe, Asia and North America*, by Henry Fairfield Osborn, LL.D. (Trinity, Princeton, Columbia), Hon. D.Sc. (Cambridge), etc., New York. The Macmillan Company, New York, 1910, pp. 635.

<sup>3</sup>In such an arrangement, as Miller says, no assumption is made of "higher" or "lower" forms, or any degree of excellency or efficiency. "The term *total of specialization* is here used to denote the sum of physical modifications which any particular mammal or group of mammals is supposed to have undergone during the course of its development away from an assumed original or generalized mammalian stock." Thus, the Chiroptera (bats) are of generalized type with specialization in the power of flight, the Cetacea (whales) are highly specialized for a purely aquatic life, whereas man is a somewhat generalized type with specialization in the development of brain size and power.

<sup>4</sup>A Checklist of African Mammals, by Glover M. Allen, Bull. Mus. Comp. Zool. at Harvard College, vol. 83, pp. 763, Cambridge, Mass., U.S.A. (February 1939).

<sup>5</sup>Natural History of Central Asia, The Mammals of China and Mongolia, by Glover M. Allen, part 1, pp. 1-620 (Sept. 2, 1938), and part 2, pp. 621-1350 (Sept. 3, 1940).

<sup>6</sup>"The discovery of primitive Cetacea in the Eocene deposits of Egypt, having teeth which in number and structure resemble those of Creodonts or early Carnivora, seems to point unequivocally to the derivation of this order from the latter through the perfection of the bodily structure for a wholly aquatic life" (Allen, 1938, op. cit., p. 494). As the Pinnipedia (seals and walrus) are structurally carnivores highly modified for an aquatic habitat, but spending part of their lives on land, the writer is in agreement with Osborn (1910, op. cit., p. 533, and Scott, W. B., A History of Land Mammals in the Western Hemisphere, 2nd ed., The Macmillan Company, New York, 1937, p. 13 (Nov. 1937)), treating the Pinnipedia as a suborder of Carnivora.



Whereas a zoological family is generally considered as a well-defined group with easily recognizable characters, the genus is treated by most zoologists as a more or less elastic grouping of somewhat similar species in the same family for convenience of classification of more or less related forms, and is often subdivided into subgenera.

In this work the species are arranged in alphabetic sequence under their respective genera, subgenera, or certain provisional "groups", which are generally considered as being more closely related to each other than to other species in the same genus or subgenus. The subspecies are considered as the more or less divergent populations that go to make up the species, and are also arranged in alphabetical order. The selection of any one of these subspecific units as representative or typical of the species is largely a matter of personal opinion and necessarily arbitrary, as for example, where the first form described is denominated as "typical."<sup>1</sup> It is understood that all forms having the same generic and specific name (that is, binomial, as *Peromyscus maniculatus*) belong to the same species, and anyone wishing to refer to one of the American white-footed mice belonging to this species without determining it subspecifically will be on scientifically secure ground by using the binomial name, or if desired, as *Peromyscus maniculatus* subsp.

In this catalogue under each species and subspecies reference is made to the first publication of the specific or subspecific name.<sup>2</sup> To this, when necessary, is added the citation of other scientific names that are familiar from long usage, although now obsolete and have been reduced to synonymy, but are cited for convenient reference. The last citation following the list of synonyms refers to the first use of the current binomial or trinomial name.<sup>3</sup> The synonyms cited are followed by a paragraph giving the type locality of the form in question, and the status and location of the type specimen so far as can be determined.

The range or geographic distribution of species is of great importance to students of zoögeography, systematic zoologists, parasitologists, sportsmen, trappers, game officials, and field-naturalists. This subject has been given careful consideration, as the range of many of our Canadian mammals has never been adequately worked out. A map showing distribution of species is often very difficult to draw accurately for lack of sufficient authentic data, which depends directly upon study of actual specimens from definitely known localities. Space forbids giving data on all specimens examined from Canadian localities, perhaps fifty thousand specimens in various North American museums and private collections, including over eighteen thousand specimens now in the National Museum of Canada. The ranges of the better known species have not been materially changed from the statements of authors of recent monographic revisions of groups, but these have been carefully gone over and later information incorporated. In many cases, particularly where new data are available regarding geographical extensions of range, records of actual specimens examined, particularly those in the National Museum of Canada, have been cited as authority for the range delimited. It is obvious that in any nominal

<sup>1</sup> "Specific and subspecific names are subject to the same rules and recommendations, and from a nomenclatural standpoint they are co-ordinate, that is, they are of the same value." Proc. 9th Intern. Zool. Congr., 1913, Article 11.

<sup>2</sup> "The author of a scientific name is that person who first publishes the name in conjunction with an indication, a definition, or a description, unless it is clear from the contents of the publication that some other person is responsible for said name and its indication, definition, or description." Proc. 9th Intern. Zool. Congr., 1913, Article 21.

"If it is desired to cite the author's name, this should follow the scientific name without the intervention of any mark of punctuation; if other citations are desirable (date, sp. n., emend., sensu stricto, etc.) these follow after the author's name, but are separated from it by a comma or by parenthesis. Examples: *Primates* Linné, 1758, or *Primates* Linné (1758)"; *ibid.*, Article 22.

<sup>3</sup> "When a species is transferred to another than the original genus or the specific name is combined with any other generic name than that with which it was originally published, the name of the author of the specific name is retained in the notation but placed in parentheses. Examples: *Taenia lata* Linné, 1758, and *Dibothriocephalus latus* (Linné, 1758); *Fasciola hepatica* Linné, 1758, and *Distoma hepaticum* (Linné, 1758).

"If it is desired to cite the author of the new combination his name follows the parenthesis. Example: *Limnatis* (Savigny, 1820) Moquin-Tandon, 1826." Proc. 9th Intern. Zool. Congr., 1913, Article 23.



range, many areas are unsuitable for some species. As very few of the mammals migrate extensively, or to great distances, a reasonable approximation of their normal range can be made if points on the boundaries of their ranges are recorded, and many additional records from outside of this range will undoubtedly be made by future workers in the field. One of the valuable functions of a published catalogue or check-list is to "smoke out" additional records that have not been published and made available to science.

In gathering information on Canadian mammals over a period of years, the writer has obtained kindly co-operation and much unpublished information from other mammalogists, officials in various institutions in Canada and the United States, and numerous naturalists in private life, many of whom are referred to elsewhere in the text. Thanks are particularly due to E. W. Nelson, A. H. Howell, H. H. T. Jackson, and E. A. Preble of the U.S. Biological Survey; Remington Kellogg of the U.S. National Museum; Glover M. Allen of the Museum of Comparative Zoology at Harvard University; E. Raymond Hall of the Museum of Vertebrate Zoology at Berkeley; J. Kenneth Doult of Carnegie Museum, Pittsburgh; H. E. Anthony of the American Museum of Natural History, New York; J. R. Dymond, L. L. Snyder, E. C. Cross, and S. C. Downing of the Royal Ontario Museum of Zoology; Frank A. Bradshaw of the Provincial Museum of Saskatchewan; Francis Kermode of the British Columbia Provincial Museum, and Ian McTaggart Cowan of the same institution, and later as a professor in Department of Zoology, University of British Columbia, Vancouver; J. Dewey Soper of the National Parks Bureau, Winnipeg; L. T. S. Norris-Elye of the Manitoba Museum; Allan Brooks of Okanagan Landing, B.C., H. M. Laing of Comox, and Kenneth Racey of Vancouver; Lawrence Potter of Eastend, Saskatchewan; Norman and Stuart Criddle of Treesbank, Manitoba; W. E. Saunders of London, Ontario; Harold B. Hitchcock of Middlebury College, Vermont; and many others whose names and records are recorded in the mammal files of the National Museum and on the labels of many specimens in the same institution. Tribute is also gratefully rendered to the author's former preceptor, the late Professor Charles Cleveland Nutting, founder and director of the Museum of Natural History at the University of Iowa, a museum builder and systematic zoologist of international fame, known also for important zoological researches in Manitoba; and to Dr. Henry Fairfield Osborn, president, and Dr. J. A. Allen, his former chief and mentor, in the American Museum of Natural History, for kindly assistance and advice in sound principles of scientific research. The writer is also indebted to A. L. Rand of the National Museum of Canada for assistance of various kinds, including careful reading of the manuscript.

In an appendix (pp. 188-201) following the recognized forms are listed twenty-five mammals whose Canadian status is hypothetical. In a preliminary list much may be gained by calling attention to forms that are known to range near our borders and may reasonably be expected to occur at present or in the near future in Canadian territory. Canada shares a vast extent of International Boundary with the United States on the south and between the territory of Alaska and British Columbia and Yukon on the northwest, with no real barriers to the spread of mammalian species except in the Great Lakes region. A great number of species have been recorded in the northern parts of the United States and in southern and eastern Alaska without as yet having been taken in Canada. Although most of the mammals do not have such pronounced migratory movements as do the birds, a few species have slight seasonal movements, big game mammals are sometimes driven out of their normal habitat by excessive hunting, predatory mammals often wander widely in quest of food, and other species are known to extend their range gradually as settlement and cultivation of the soil change the vegetation and food supply. The northern white-tailed deer



(*Odocoileus virginianus borealis*) has extended its range much farther to the north and east with the cutting of the primitive coniferous forests, and the mule deer (*O. hemionus*) is moving northwestward at an equally rapid rate. The northern cottontail (*Sylvilagus floridanus mearnsii*) has within a few years moved a great distance northward into eastern Ontario and southern Quebec, and the Nebraska cottontail (*S. f. similis*) has since 1889 moved northward across the whole State of North Dakota and is now well established some distance into Manitoba. The Black Hills cottontail (*Sylvilagus nuttalli grangeri*) is spreading from its former very limited range in extreme southern Alberta and Saskatchewan, and the Washington cottontail (*S. n. nuttalli*) has also spread northward, reaching the lower Okanagan Valley first in 1939.

Although this list is admittedly not complete, it represents an approximate summary of the available knowledge of the occurrence of mammals in Canada, and no species has been included unless Canadian specimens have been examined or recorded on similar evidence from competent mammalogists. The Division of Biology, National Museum of Canada, Ottawa, will welcome any additions or corrections. The list of Cetaceans (whales and porpoises) is admittedly a nominal one, owing to the lack of information on the distribution of the widely ranging species of the high seas, some of which do not come inside territorial waters other than casually or by accident. As an assistance to persons who may have the opportunity of examining specimens of stranded cetaceans, the modern nomenclature is given for twenty-seven species that are definitely known on our shores, and seventeen recorded from the north Atlantic, north Pacific, and western Arctic Oceans, and which are considered as possibilities in our marine fauna, are included in the hypothetical list.

Records of Canadian species in other institutions are indicated by the following abbreviations:

- B.C.P.M., British Columbia Provincial Museum, Victoria.
- Br. Mus. (Nat. Hist.), British Museum (Natural History), London.
- A.M.N.H., American Museum of Natural History, New York.
- A.N.S.P., Academy of Natural Sciences, Philadelphia.
- C.M., Carnegie Museum, Pittsburgh, Pa.
- Chicago M.N.H., Chicago Museum of Natural History (formerly Field Mus. Nat. Hist.).
- M.C.Z., Museum of Comparative Zoology, Cambridge, Mass.
- M.V.Z., Museum of Vertebrate Zoology, Berkeley, Calif.
- N.M.C., National Museum of Canada, Ottawa.
- R.O.M.Z., Royal Ontario Museum of Zoology, Toronto.
- U.S.N.M., United States National Museum, Washington.

Beneath the section devoted to each species and subspecies in this Catalogue will be found in parentheses a list of the provinces in which each form is known to occur. This will serve as a basis for a Catalogue or Check-list of the mammals of each province and territory of Canada.

#### Abbreviations used:

- Alta.—Alberta.
- B.C.—British Columbia.
- Man.—Manitoba.
- N.B.—New Brunswick.
- N.S.—Nova Scotia.
- N.W.T.—Northwest Territories.
- Ont.—Ontario.
- P.E.I.—Prince Edward Island.
- P.Q.—Quebec.
- Sask.—Saskatchewan.
- Y.T.—Yukon territory.
- Labr.—Labrador (Newfoundland Labrador).
- Nfld.—Newfoundland.



In the following list of Canadian mammals an asterisk (\*) is placed before the name of each species and subspecies represented in the National Collection, in the National Museum of Canada, Ottawa. A dagger (†) indicates that the *type specimen* of the form is also in the National Collection, and a double dagger (‡) that a *topotype* is in the National Collection. Having a nominal specimen of a given form in the collection does not necessarily mean that the National Museum has an adequate representation of the said form. In many cases it represents only a skull, a skin, or a skeleton sufficiently intact to determine the identity. This is notably the case with the big game species and the fur-bearing mammals, the former being difficult to transport and desirable as "trophies" by sportsmen, and the latter being of too great commercial value to be purchased with the limited funds of the National Museum. Skulls of fur-bearers are a "by-product" of the trapping industry and are generally thrown away by trappers, but when obtainable they are very useful for scientific comparisons, as a large number of closely related forms are identified to a great extent, and sometimes entirely differentiated, by the skull and dental characters.

The following table shows the names of mammalian orders and families found in Canada, the approximate number of forms (species and subspecies) in North America as a whole, the number of forms in each family recorded from Canada, the number of forms represented in the collections of the National Museum of Canada, and the number of type specimens in the Museum.



Canadian mammals, orders, suborders, and families	Forms of same known in N. Amer. (1924)	Known in Canada (1946)	Forms in Nat. Mus., Canada	Types in Nat. Mus., Canada
MARSUPIALIA (marsupials)				
Didelphiidae (opossums).....	38	1	1	0
INSECTIVORA (insect-eaters).....				
Talpidae (moles).....	30	7	7	0
Soricidae (shrews).....	117	43	35	5
CHIROPTERA (bats).....				
Vespertilionidae (common Canadian bats)....	88	28	24	0
Molossidae (mastiff bats).....	32	1	0	0
PRIMATES (suborder Anthropoidea).....				
Hominidae (men).....	4	4	4	0
CARNIVORA (flesh-eaters).....				
Suborder Fissipedia.....				
Procyonidae (raccoons).....	31	4	3	0
Ursidae (bears).....	103	43	31	3
Canidae (foxes, wolves).....	68	38	24	3
Mustelidae (weasel family).....	150	60	47	3
Felidae (cats, cougars, lynxes).....	43	10	7	0
Suborder Pinnipedia.....				
Otariidae (sea-lions, fur-seals).....	4	3	2	0
Phocidae (hair-seals).....	14	11	9	2
Odobenidae (walruses).....	2	2	2	0
CETACEA.....				
Suborder Odontoceti (toothed cetaceans)....				
Physeteridae (sperm whales).....	1	1	0	0
Kogiidae (pigmy sperm whale).....	1	1	0	0
Delphinidae (porpoises, dolphins).....	24	12	4	0
Ziphiidae (beaked whales).....	8	4	0	0
Suborder Mysticeti (baleen whales).....				
Balaenidae (right whales).....	3	3	0	0
Rhachianectidae (gray whale).....	1	1	0	0
Balaenopteridae (finback whales).....	5	5	0	0
RODENTIA (gnawing mammals).....				
Suborder Duplicidentata (hares, pikas).....				
Ochotonidae (pikas, mouse-hares).....	24	8	8	0
Leporidae (hares, rabbits).....	102	25	23	1
Suborder Simplicidentata (typical rodents)...				
Sciuridae (marmots, squirrels).....	322	73	71	7
Geomyidae (pocket gophers).....	143	10	10	0
Heteromyidae (pouched mice and rats).....	195	4	4	1
Castoridae (beavers).....	13	10	6	0
Cricetidae (voles, lemmings, etc.).....	604	116	101	14
Muridae (Old World rats and mice).....	5	4	3	0
Aplodontidae (mountain beavers).....	9	2	2	0
Zapodidae (jumping mice).....	24	18	18	5
Erethizontidae (porcupines).....	12	6	6	0
ARTIODACTYLA (even-toed ungulates).....				
Cervidae (elk, deer, moose, caribou).....	60	23	19	1
Antilocapridae (pronghorns).....	3	1	1	0
Bovidae (bison, musk-oxen, sheep, goats)...	23	12	12	1
Totals.....	2,306	594	484	46



Class MAMMALIA. Mammals, Mammifères

Subclass EUTHERIA. Viviparous Mammals<sup>1</sup>

Superorder DIDELPHIA. Marsupials or Pouched Mammals

Order Marsupialia. Marsupials

Suborder POLYPROTODONTIA. Chiefly Insectivorous and Carnivorous Marsupials and their Allies.

Family DIDELPHIDAE. Opossums

Genus *Didelphis* Linnaeus. Opossums<sup>2</sup>

1758. *Didelphis* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 54. Type, *Didelphis marsupialis* Linnaeus.

\**Didelphis virginiana virginiana* Kerr. VIRGINIA OPOSSUM. *Opossum de Virginie*.

1792. *Didelphis virginiana* Kerr, Anim. Kingd., p. 193.

1885. *Didelphis virginiana* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 587 (1885).

1924. *Didelphis virginiana virginiana* Miller, List N. Amer. Recent Mamm., 1923, p. 3.

*Type Locality.* Virginia.

*Range.* From the Great Lakes southward to Oklahoma, northern Texas, and nearly to the Gulf Coast; east to the lower Hudson Valley and Long Island; a few records from southern Ontario (Essex, Kent, and Middlesex counties), but not known to be definitely resident in Canada at the present time. (Introductions: California; Grinnell, Calif. Fish and Game, 1:3, pp. 1-3, 1915. Oregon, Jewett and Dobyns, Journ. Mamm., 10:4, p. 351. Washington, Skagit county, Scheffer, The Murrelet, 24:2, pp. 27-28. The establishment of the opossum in extreme Washington indicates that it will probably spread into parts of extreme southwestern British Columbia.) (Ont.)

Superorder MONODELPHIA. Placental Mammals

Order Insectivora. Insectivores

Family TALPIDAE. Moles<sup>3</sup>

Subfamily Scalopinæ

Genus *Scapanus* Pomel<sup>4</sup>

1848. *Scapanus* Pomel, Arch. Sci. Phys. Nat. Genève, vol. 9, p. 247. Type, *Scalops townsendii* Bachman.

\**Scapanus townsendii* (Bachman). TOWNSEND'S MOLE. OREGON MOLE. *Taupe de Townsend*.

1839. *Scalops townsendii* Bachman, Journ. Acad. Nat. Sci., Phila., vol. 8, pt. 1, p. 58.

1848. *Scapanus tow[n]sendii* Pomel, Arch. Sci. Phys. Nat. Genève, ser. 4, vol. 9, p. 247.

1885. *Scapanus townsendii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

*Type Locality.* Vicinity of Vancouver, Clarke county, Washington. (See True, Proc. U.S. Nat. Mus., vol. 19, p. 63 (Dec. 21, 1896).) (Cotype: Acad. Nat. Sci. Phila., No. 449.)

<sup>1</sup>Includes all the North American species of mammals. The other more primitive subclass, *Prototheria* (egg-laying mammals), was considered by Osborn (Age of Mammals, 1910, 515) to be doubtfully represented in the Upper Triassic of North America. The only living forms of the subclass *Prototheria* are in the order *Monotremata* (monotremes), represented by the family *Echidnidae* (spiny ant-eaters) of Australia and New Guinea, and the family *Ornithorhynchidae* (duckbill or platypus) of eastern and southern Australia and of Tasmania.

<sup>2</sup>Revised by Allen, Bull. Amer. Mus. Nat. Hist., vol. 14, pp. 149-188 (June 15, 1901).

<sup>3</sup>Revised by True, Proc. U.S. Nat. Mus., vol. 19, pp. 47-106, Dec. 21, 1896; and Jackson, North Amer. Fauna, No. 38, pp. 54-98 (Sept. 30, 1915).

<sup>4</sup>Revised by True, Proc. U.S. Nat. Mus., vol. 19, pp. 47-67, Dec. 21, 1896; and Jackson, North Amer. Fauna, No. 38, pp. 54-76 (Sept. 30, 1915).



*Range.* Extreme northwestern Oregon and Washington west of the Cascade Mountains, north to extreme southwestern British Columbia. In Canada known only from Huntingdon\* just north of the International Boundary, where the first specimens were taken in 1927, burrowing on comparatively low ground; *Scapanus orarius schefferi*, a somewhat smaller species, was found higher up on the terraces of Chilliwack Valley. (Nat. Mus., Canada, Ann. Rept. 1927 (1929), p. 20.) (B.C.)

\**Scapanus orarius schefferi* Jackson. SCHEFFER'S MOLE. *Taupe de Scheffer*.

1915. *Scapanus orarius schefferi* Jackson, North Amer. Fauna, No. 38, p. 63 (Sept. 30, 1915).

*Type Locality.* Walla Walla, Walla Walla county, Washington. (Type: U.S.N.M., No. 204997.)

*Range.* Extreme southwestern British Columbia south of Fraser River (Chilliwack Valley\*, Cultus Lake\*, Hope\*, Huntingdon\*, New Westminster, Vancouver), northwestern Washington (east of Puget Sound and north of latitude 48 degrees north, where it intergrades with *S. o. orarius*), central and southern Washington from the west slopes of Cascade Mountains east to Walla Walla, and both slopes of Cascade Mountains in northern and east-central Oregon. (B.C.)

#### Genus *Parascalops* True<sup>1</sup>

1894. *Parascalops* True, Diagnoses of new North American Mammals, p. 2 (April 26, 1894). (Reprint: Proc. U.S. Nat. Mus., vol. 17, p. 242 (Nov. 15, 1894).) Type, *Scalops breweri* Bachman.

\**Parascalops breweri* (Bachman). HAIRY-TAILED MOLE. BREWER'S MOLE. *Taupe à queue chevelue*.

1842. *Scalops breweri* Bachman, Boston Journ. Nat. Hist., vol. 4, p. 32.

1885. *Scapanus breweri* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).

1895. *Parascalops breweri* True, Science, n.s., vol. 1, p. 101 (Jan. 25, 1895).

*Type Locality.* Eastern North America; type supposed by Bachman to have been taken on the island of Marthas Vineyard, Massachusetts, a locality where the animal probably does not occur. (Type specimen not known to exist.)

*Range.* Southeastern Canada and northeastern United States from southern New Brunswick, southern Quebec, and eastern\* and southern Ontario west to Sault Ste. Marie and Pancake Bay\*, at east end of Lake Superior; south to northeastern Ohio and southern Pennsylvania and in the Appalachian Mountains to western North Carolina. (N.B., Ont., P.Q.)

#### Genus *Scalopus* Geoffroy<sup>2</sup>

1804. *Scalopus* Geoffroy, Catal. Mamm. Mus. Hist. Nat., Paris, p. 77. Type, *Sorex aquaticus* Linnaeus.

\**Scalopus aquaticus machrinus* (Rafinesque). PRAIRIE MOLE. *Taupe des prairies*.

1832. *Talpa machrina* Rafinesque, Atlantic Journal, vol. 1, p. 61.

1885. *Scalops aquaticus argentatus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).

1896. *Scalops aquaticus machrinus* True, Proc. U.S. Nat. Mus., vol. 19, p. 20 (Dec. 21, 1896).

1905. *Scalopus aquaticus machrinus* Elliot, Field Columb. Mus., publ. 105, zool. series, vol. 6, p. 470 (1905).

*Type Locality.* Near Lexington, Fayette county, Kentucky. (Type not known to exist.)

*Range.* Eastern Iowa, and east of the Mississippi River west of the Appalachian Mountains from western Wisconsin, northern Illinois, southern Michigan, southwestern Ontario (Point Pelee\*), and northern Ohio, south to central Tennessee. In Canada known to occur definitely only in Essex county, Ontario, where it is common locally. (Ont.)

<sup>1</sup>Revised by True, Proc. U.S. Nat. Mus., vol. 19, pp. 67-77 (Dec. 21, 1896); and Jackson, North Amer. Fauna, No. 38, pp. 77-82 (Sept. 30, 1915).

<sup>2</sup>Revised by True, Proc. U.S. Nat. Mus., vol. 19, pp. 19-47 (Dec. 21, 1896); and Jackson, North Amer. Fauna, No. 38, pp. 27-54 (Sept. 30, 1915).



Subfamily **Uropsilinae**Genus *Neurotrichus* Gunther<sup>1</sup>

1880. *Neurotrichus* Gunther, Proc. Zool. Soc. London, p. 441. Type, *Urotrichus gibbsii* Baird.

\**Neurotrichus gibbsii gibbsii* (Baird). GIBBS' SHREW MOLE. *Taupe de Gibbs*.

1857. *Urotrichus gibbsii* Baird, Mamm. N. Amer. p. 76.

1885. *Neurotrichus gibbsii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

*Type Locality.* White River Pass, north of Mount Rainier, Pierce county, Washington. (Type: U.S.N.M., No. 662/1843.)

*Range.* Extreme southwestern British Columbia north to North Vancouver, western Washington and Oregon west of the Cascade Mountains, south in the coast region to Eureka, Humboldt county, California, and in the interior, west of the Sierra Nevada, to South Yolla Bolly Mountain, California. (B.C.)

Subfamily **Condylurinae**Genus *Condylura* Illiger<sup>2</sup>

1811. *Condylura* Illiger, Prodr. Syst. Mamm. et Avium, p. 125. Type, *Sorex cristatus* Linnaeus.

\**Condylura cristata cristata* (Linnaeus). STAR-NOSED MOLE. *Taupe au nez étoilé*.

1758. [*Sorex*] *cristatus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 53.

1819. *Condylura cristata* Desmarest, Journ. de Physique, de Chimie, d'Hist. Nat. et des Arts, vol. 89, p. 232 (Sept. 1819).

1915. *Condylura cristata* Jackson, North Amer. Fauna, No. 38, p. 86.

*Type Locality.* Eastern Pennsylvania. (Location of type unknown.)

*Range.* From Atlantic coast of Labrador through eastern and southern Canada to southwestern Manitoba (Riding Mountain); north to Hamilton Inlet (Labrador), East Main River (Quebec, east side of James Bay), south and west sides of James Bay (Ontario), and to Riding Mountain in Manitoba; south through New Brunswick and all the New England states; in the Atlantic coast region south to Virginia (Dismal Swamp) and Georgia (Marlow), and in the Appalachian Mountains to western North Carolina. (Man., N.B., Ont., P.Q., Labr.)

\**Condylura cristata nigra* R. W. Smith. NOVA SCOTIA STAR-NOSED MOLE. *Taupe au nez étoilé de la Nouvelle-Ecosse*.

1940. *Condylura cristata nigra* R. W. Smith, The American Midland Naturalist, Notre Dame, Indiana, vol. 24, No. 1, pp. 218-219 (July 1940).

*Type Locality.* Wolfville, Kings county, Nova Scotia. (Type: M.V.Z., No. 86603.)

*Range.* "Nova Scotia". (R. W. Smith.) (N.S.)

Family **SORICIDAE**. ShrewsSubfamily **Soricinae**Genus *Sorex* Linnaeus<sup>3</sup>

1758. *Sorex* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 53. Type, *Sorex araneus* Linnaeus.

<sup>1</sup>Revised by True, Proc. U.S. Nat. Mus., vol. 19, pp. 98-106 (Dec. 21, 1896); and Jackson, North Amer. Fauna, No. 38, pp. 92-98 (Sept. 30, 1915).

<sup>2</sup>Revised by True, Proc. U.S. Nat. Mus., vol. 19, pp. 77-98 (Dec. 21, 1896); and Jackson, North Amer. Fauna, No. 38, pp. 82-91 (Sept. 30, 1915).

<sup>3</sup>Revised by Merriam, North Amer. Fauna, No. 10, pp. 57-98 (Dec. 31, 1895); Hollister, Proc. U.S. Nat. Mus., vol. 40, pp. 377-381 (April 17, 1911); and Jackson, North Amer. Fauna, No. 51, pp. 1-238 (July 1928).



Subgenus *Sorex* Linnaeus*cinereus* group

\**Sorex cinereus cinereus* Kerr. COMMON CINEREOUS SHREW. *Musaraigne commune*.

1792. *Sorex arcticus cinereus* Kerr, Animal Kingdom, p. 206.  
 1827. *Sorex personatus* I. Geoffroy Saint-Hilaire, Dictionnaire Classique d'Hist. Nat. 11; 319 (Jan. 1827).  
 1925. *Sorex cinereus cinereus* Jackson, Jour. Mamm., 6: 1, pp. 55-56 (Feb. 9, 1925).

*Type Locality.* Severn Settlement (now Severn), mouth of Severn River, southwest side of Hudson Bay, Ontario. (Type not now known to exist.)

*Range.* Quebec from Chimo and western end of Gulf of St. Lawrence west, the whole of Ontario, eastern and northern Manitoba, northern Saskatchewan, northern and western Alberta, and Northwest Territories to northern limit of trees, central and southern Yukon and east-central Alaska, south to New Jersey, the mountains of North Carolina and Tennessee, southern Indiana, northern Illinois, northeastern Iowa, and eastern Minnesota, through the mountains of western Montana and western Wyoming to northern New Mexico, northwestern and central Washington. (Alta., B.C., Man., N.W.T., Ont., P.Q., Sask., Y.T.)

\**Sorex cinereus acadicus* Gilpin. MARITIME GRAY SHREW. *Musaraigne grise des Maritimes*.

1867. *Sorex acadicus* Gilpin, Proc. and Trans. Nova Scotian Inst. Nat. Sci., 1 (pt. 2): 2. Type from Nova Scotia.  
 1928. *Sorex cinereus cinereus* Jackson, N.A. Fauna, No. 51, p. 41.  
 1940. *Sorex cinereus acadicus* R. W. Smith, The American Midland Naturalist, Notre Dame, Indiana, vol. 24, No. 1, pp. 219-220.

*Type Locality.* Nova Scotia (assumed to be in vicinity of Halifax, Halifax county). Type not known to exist. (See Gilpin, op. cit., for possible designation of type specimen.)

*Range.* Nova Scotia, New Brunswick, Prince Edward Island, and parts of eastern Quebec. R. W. Smith. (N.B., N.S., P.E.I., P.Q.)

*Sorex cinereus haydeni* Baird. HAYDEN'S CINEREOUS SHREW. *Musaraigne de Hayden*.

1857. *Sorex haydeni* Baird, Mamm. N. Amer., p. 29.  
 1896. *Sorex personatus haydeni* Allen, Bull. Amer. Mus. Nat. Hist., vol. 8, p. 257 (Nov. 25, 1896).  
 1928. *Sorex cinereus haydeni* Jackson, Journ. Mamm., vol. 6, No. 1, Feb. 1925, p. 56.

*Type Locality.* Fort Union, near present town of Buford, Williams county, North Dakota. (Type: U.S.N.M., No. 1685.)

*Range.* Extreme east-central Alberta (Islay)\*, southern Saskatchewan\*, southwestern Manitoba\*, south through extreme western Minnesota to northwestern Iowa, northern Nebraska, and through eastern Montana to southeastern Wyoming. (Jackson, 1928.) (Alta., Sask., Man.)

\**Sorex cinereus miscix* Bangs. LABRADOR CINEREOUS SHREW. *Musaraigne du Labrador*.

1899. *Sorex personatus miscix* Bangs, Proc. New England Zool. Club, vol. 1, p. 15 (Feb. 28, 1899).  
 1925. *Sorex cinereus miscix* Jackson, Journ. Mamm., 6:1, 55-6 (Feb. 9, 1925).

*Type Locality.* Black Bay, Strait of Belle Isle, Labrador, Canada. (Type: M.C.Z., No. 8651, Bangs coll.)

*Range.* Labrador south of latitude 58 degrees north: west in Quebec along the north shore of the Gulf of St. Lawrence at least as far as Moisie River and Bay of Seven Islands. (Labr., P.Q.)



\**Sorex cinereus streatori* Merriam. STREATOR'S CINEREOUS SHREW. *Musaraigne de Streater*.

1895. *Sorex personatus streatori* Merriam, North Amer. Fauna, No. 10, p. 62 (Dec. 31, 1895).

1925. *Sorex cinereus streatori* Jackson, Journ. Mamm., 6: 1, 55-6 (Feb. 9, 1925).

*Type Locality.* Yakutat, Alaska. (Type: U.S.N.M., No. 73637.)

*Range.* Pacific coast region of North America from the southeastern part of Kenai Peninsula, Alaska, along the British Columbia coast, west of the Cascades (Bella Coola\*, Metlakatla\*, Observatory Inlet\*, Port Simpson, Rivers Inlet\*) south to central Washington. (B.C.)

†\**Sorex cinereus ugyunak* Anderson and Rand. ARCTIC LONG-TAILED SHREW. *Musaraigne arctique à queue longue*.

1945. *Sorex cinereus ugyunak* Anderson and Rand, Can. Field Nat., vol. 59, No. 2, March-April, 1945, p. 62 (Oct. 16, 1945).

*Type Locality.* Tuktoyaktok (Tuktak), about 20 miles southwest of Toker Point, on Arctic coast near northeastern corner of Mackenzie River delta, Mackenzie district, Northwest Territories, Canada; at sea-level; trapped in abandoned wood-and-sod house (old village site); collected by R. M. Anderson, October 28, 1911; orig. No. 358. (Type: A.M.N.H., No. 31365.)

*Range.* Arctic tundra region from northwestern side of Hudson Bay in Keewatin district (Chesterfield\*; Padley Post\* 45 miles southwest), west along the Arctic coast to Mackenzie district (Coronation Gulf\*, Horton River, Harrowby Bay, Tuktak, and Aklavik\*), and northeastern Arctic Alaska (Hulahula River, Okpilak River\* near Barter Island), and above timber-line in Brooks (or Endicott) Range about 80 miles west of Alaska-Yukon International Boundary. (N.W.T., Keewatin and Mackenzie districts; probably also in Arctic part of Yukon.)

#### *fumeus* group

\**Sorex fumeus fumeus* Miller. SMOKY SHREW. *Musaraigne fumée*.

1885. *Sorex forsteri* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).

1895. *Sorex fumeus* Miller, North Amer. Fauna, No. 10, p. 50 (Dec. 31, 1895).

*Type Locality.* Peterboro, Madison county, New York. (Type: Br. Mus., No. 7.7.7.2582.)

*Range.* Canadian and upper part of Transition faunas of eastern United States; southward in higher Alleghenies to mountains of North Carolina and Tennessee. "New Hampshire, Vermont, Connecticut, Rhode Island, and northern New York, south through northwestern New Jersey, Pennsylvania, and western Maryland, to south-central Ohio and northwestern Georgia; also recorded from Ontario (North Bay) and southeastern Wisconsin (Racine)." (Jackson, N.A. Fauna, No. 51, 1928, p. 63.)

Recent summing up of Ontario and Quebec records show that *Sorex fumeus* is found locally as far south as Middlesex (London), Oxford, and Elgin counties in southern Ontario; various points on east and north sides of Lake Superior (Pancake Bay\*, Schreiber\*, Thunder Bay\*); north in Ontario to Fraserdale (on Temiskaming and Northern Ontario Railway north of Cochrane); and in Quebec north and east to Lake Edward (Champlain and Quebec counties), and east on north side of St. Lawrence River to St. Joachim\*, Montmorency county. (See, in part, Anderson, Mamm. Quebec, Ann. Rept. Provancher Soc., 1938, 57; Prince, Can. F-Nat. 45: 7, 1941, 103.) (Ont., P.Q.)



\***Sorex fumeus umbrosus** Jackson. NORTHERN SMOKY SHREW. *Musaraigne sombre*.

1917. *Sorex fumeus umbrosus* Jackson, Proc. Biol. Soc. Wash., vol. 30, p. 149 (July 27, 1917).

*Type Locality.* James River, Antigonish county, Nova Scotia. (Type: U.S.N.M., No. 150065.)

*Range.* All parts of mainland of Nova Scotia\* (and probably Cape Breton Island), New Brunswick\*, Gaspé Peninsula, and southeastern Quebec at least as far west as Rivière-du-Loup. (N.B., N.S., P.Q.)

#### *arcticus* group

\***Sorex arcticus arcticus** Kerr. AMERICAN SADDLE-BACKED SHREW. *Musaraigne ensellée*.

1792. *Sorex arcticus* Kerr, Animal Kingdom, p. 203 (not *Sorex personatus arcticus* Merriam, 1900).

1837. *Sorex richardsonii* Bachman, Journ. Acad. Nat. Sci. Philadelphia, 7: pt. 2, p. 383.

1877. *Sorex sphagnicola* Coues, U.S. Geol. and Geog. Surv., 3: 650 (May 15, 1877). Fort Liard, Northwest Territories. (Type: U.S.N.M., No. 6361.)

1892. †*Sorex belli* Merriam, Proc. Biol. Soc. Wash., 7: 25 (April 13, 1892). (Based on Dobson MS., 1885. Type locality: Shamattawa River, tributary of Hayes River, Hudson Bay, Manitoba.) *Nomen nudum*, Merriam, 1895, 65, synonym of *S. sphagnicola*. (Type in N.M.C., Ottawa, No. 46.)

1925. *Sorex arcticus arcticus* Jackson, Proc. Biol. Soc. Wash., 38: 127 (Nov. 13, 1925).

*Type Locality.* Severn Settlement (now Severn), mouth of Severn River, southwest side of Hudson Bay, Ontario, Canada. (Type not now known to exist.)

*Range.* From Norman, Mackenzie district, Northwest Territories, southwest to northeastern British Columbia, and southeasterly along Mackenzie and Slave Rivers, northern and central Alberta, central Saskatchewan, and Manitoba, to northwestern North Dakota, the north side of Lake Superior in Ontario, and Saguenay county, Quebec. (Alta., B.C., Man., N.W.T., Ont., P.Q., Sask.)

**Sorex arcticus laricorum** Jackson. SOUTHERN SADDLE-BACKED SHREW. *Musaraigne ensellée du sud*.

1925. *Sorex arcticus laricorum* Jackson, Proc. Biol. Soc. Wash., vol. 38, p. 127 (Nov. 13, 1925).

*Type Locality.* Elk River, Sherburne county, Minnesota. (Type: U.S.N.M., No. 186837.)

*Range.* Northern parts of Michigan, Wisconsin, Minnesota, and North Dakota, to southern Manitoba (Emerson and Marchand), northwesterly as far as Aweme and Carberry, where it shows signs of intergradation with *S. a. arcticus*. (Man.)

\***Sorex arcticus maritimensis** R. W. Smith. MARITIME SADDLE-BACKED SHREW. *Musaraigne ensellée des Maritimes*.

1939. *Sorex arcticus maritimensis* R. W. Smith, Jour. Mamm., vol. 20, No. 2, pp. 244-245 (May 14, 1939).

*Type Locality.* Wolfville, Kings county, Nova Scotia. (Type: M.C.Z., No. 84479.)

*Range.* Nova Scotia and probably New Brunswick. (N.S.)

\***Sorex tundrensis** Merriam. TUNDRA SADDLE-BACKED SHREW. *Musaraigne ensellée des tundras arctiques*.

1900. *Sorex tundrensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 16 (March 14, 1900).

*Type Locality.* St. Michael, Norton Sound, Alaska. (Type: U.S.N.M., No. 99286.)

*Range.* Western and central Alaska from Bering Strait and Bristol Bay eastward; northern Yukon (Fortymile), and northwestern part of Mackenzie district, Northwest Territories (Peel River, Mackenzie delta\*, Anderson River near Liverpool Bay). (N.W.T., Y.T.)



*dispar* group

***Sorex gaspensis*** Anthony and Goodwin. GASPE GRAY SHREW. *Musaraigne grise de Gaspé*.

1924. *Sorex gaspensis* Anthony (H.E.) and Goodwin (G.G.), Amer. Mus. Novitates, No. 109, March 10, 1924, pp. 1-2.

*Type Locality.* Mount Albert, Gaspé Peninsula, Quebec, 2,000 feet elevation; Sept. 5, 1923; collector G. G. Goodwin. (Type: A.M.N.H., No. 64190.)

*Range.* Known only from Gaspé Peninsula, Quebec. Three specimens taken in 1923 on north slope of Shickshock Mountains, and nine specimens in 1927 in valley of Cascapedia River, on south slope of Shickshock Mountains.

The only other member of the *Sorex dispar* group is *Sorex dispar* Batchelder (1911), type from Beedes (commonly called Keene Heights), Essex county, Adirondack Mountains in northern New York. Only about 15 specimens are known, from Adirondacks and Catskills in New York, Mount Graylock in western Massachusetts, and mountains in northeastern Pennsylvania and southern West Virginia. *S. dispar* has never been found in Canada, but may possibly occur in the highlands north of the New England border.

*trowbridgii* group

**\**Sorex trowbridgii trowbridgii*** Baird. TROWBRIDGE'S SHREW. *Musaraigne de Trowbridge*.

1857. *Sorex trowbridgii* Baird, Mamm. N. Amer., p. 13.  
1922. *Sorex trowbridgii trowbridgii* Jackson, Journ. Wash. Acad. Sci. 12: 264 (June 4, 1922).

*Type Locality.* Astoria, mouth of the Columbia River, Clatsop county, Oregon. (Cotypes, U.S.N.M., No. 813/3088.)

*Range.* Extreme southwestern British Columbia (Chilliwack Valley\*, Cultus Lake\*, Douglas\*, Hope, Huntingdon\*, Sumas\*) north to Fraser River delta and Hope; western Washington and Oregon, and extreme northwestern California (south to mouth of Klamath River). (B.C.)

*vagrans-obscurus* group

**\**Sorex vagrans vagrans*** Baird. VAGRANT SHREW. *Musaraigne errante*.

1857. *Sorex vagrans* Baird, Mamm. N. Amer., p. 15.  
1891. *S[orex] vagrans* Merriam, North Amer. Fauna, No. 5, p. 34 (July 30, 1891).  
1912. *Sorex vagrans vagrans* Miller, U.S. Nat. Mus. Bull. 79, p. 14 (Dec. 31, 1912).

*Type Locality.* Shoalwater Bay (known also as Willapa Bay), Pacific county, Washington. (Type: U.S.N.M., No. 1675.)

*Range.* Southern British Columbia, western Washington and Oregon, and northern California (south on the coast to Monterey and in the mountains to old Fort Crook and Cassel). Restricted to lower Boreal and upper Transition zones. Extreme southwestern mainland of British Columbia north to Fraser River delta (Huntingdon\*, Chilliwack\*, Cultus Lake\*, Lihumitson Park\*, Point Gray); western Washington and western Oregon, and northwestern California south to San Francisco Bay. (B.C.)

**\**Sorex vagrans monticola*** (Merriam). MOUNTAIN VAGRANT SHREW. *Musaraigne des montagnes*.

1890. *Sorex monticolus* Merriam, North Amer. Fauna, No. 3, p. 43 (Sept. 11, 1890).  
1891. *Sorex dobsoni* Merriam, North Amer. Fauna, No. 5, p. 33 (July 30, 1891). Type locality, Alturas or Sawtooth Lake, altitude about 7,200 feet, east base of Sawtooth Mountains, Blaine county, Idaho.  
1891. *Sorex vagrans dobsoni* Merriam, North Amer. Fauna, No. 10, p. 68 (Dec. 31, 1895).  
1895. *Sorex vagrans monticola* Merriam, North Amer. Fauna, No. 10, p. 69 (Dec. 31, 1895).

*Type Locality.* San Francisco Mountain, Coconino county, Arizona. Altitude 11,500 feet. (Type: U.S.N.M., No. 17599/24535.)



*Range.* Extreme southern interior of British Columbia, from Similkameen Valley, lower Okanagan Valley\*, Columbia Valley (Rossland\*, Trail\*), to East Kootenay (Newgate\*, Morrissey\*) at western foothills of Rocky Mountains; south through eastern Washington, eastern Oregon, Idaho, western Montana, western Wyoming, south through eastern Utah, western Colorado, eastern Arizona, and western New Mexico to southern Chihuahua, Mexico. (B.C.)

\***Sorex vagrans vancouverensis** Merriam. VANCOUVER ISLAND VAGRANT SHREW. *Musaraigne errante de l'île de Vancouver.*

1895. *Sorex vancouverensis* Merriam, North Amer. Fauna, No. 10, p. 70 (Dec. 31, 1895).

1928. *Sorex vagrans vancouverensis* Jackson, North Amer. Fauna, No. 51, p. 106 (July 1928).

*Type Locality.* Goldstream, Vancouver Island, British Columbia, Canada. (Type: U.S.N.M., No. 71913.)

*Range.* Southern part of Vancouver Island, north on east coast to Sayward\*, a little north of 50 degrees north. (B.C.)

\***Sorex obscurus obscurus** Merriam. DUSKY MOUNTAIN SHREW. *Musaraigne obscure des montagnes.*

1891. *Sorex vagrans similis* Merriam, North Amer. Fauna, No. 5, p. 34 (July 30, 1891). (Not of Hensel, 1855.)

1895. *Sorex obscurus* Merriam, North Amer. Fauna, No. 10, p. 72 (Dec. 31, 1895). (Substitute for *similis* Merriam.)

*Type Locality.* Timber Creek, Lemhi Mountains (=“Salmon River Mountains”), Lemhi county, Idaho. Altitude 8,200 feet. (Type: U.S.N.M., No. 23525/30943.)

*Range.* From central Alaska, southeasterly through southern Yukon (Alaska Highway\*, Canol Road\*, Dezadeash Lake\*, Haines Road\*), northern and eastern British Columbia, southwestern Mackenzie district, Northwest Territories (Canol Road, Macmillan Pass\*), Nahanni Mountains, Resolution, Simpson\*, northern and western Alberta\*, eastern Washington, Idaho, western Montana, western Colorado, south to southern Utah and north-central New Mexico. (Alta., B.C., N.W.T., Y.T.)

\***Sorex obscurus alascensis** (Merriam). ALASKAN DUSKY SHREW. *Musaraigne obscure d'Alaska.*

1895. *Sorex obscurus alascensis* Merriam, North Amer. Fauna, No. 10, p. 76 (Dec. 31, 1895).

1900. *S[orex] alascensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 18 (March 14, 1900).

1928. *Sorex obscurus alascensis* Jackson, North Amer. Fauna, No. 51, p. 126 (July 1928).

*Type Locality.* Yakutat Bay, Alaska. (Type: U.S.N.M., No. 73539.)

*Range.* Coast region of Alaska from southern part of Kenai Peninsula south to Juneau; also Sheslay River, northwestern British Columbia. (B.C.)

‡**Sorex obscurus calvertensis** Cowan. CALVERT ISLAND DUSKY SHREW. *Musaraigne obscure de l'île Calvert.*

1941. *Sorex obscurus calvertensis* Cowan, Proc. Biol. Soc. Wash., vol. 54, p. 103 (July 31, 1941).

*Type Locality.* Safety Cove, Calvert Island, British Columbia. (Type: Prov. Mus. B.C., No. 1947.)

*Range.* Calvert Island and Banks Island, British Columbia. (Specimens examined by Dr. Cowan—Calvert Island: Safety Cove 23, Kwakshua 2. Banks Island: Larson Harbour 9. Five additional specimens from Safety Cove are in National Museum of Canada collection.) (B.C.)

\***Sorex obscurus elassodon** Osgood. QUEEN CHARLOTTE DUSKY SHREW. *Musaraigne obscure de la reine Charlotte.*

1901. *Sorex longicauda elassodon* Osgood, North Amer. Fauna, No. 21, p. 35 (Sept. 26, 1901).

1928. *Sorex obscurus elassodon* Jackson, North Amer. Fauna, No. 51, p. 130 (July 1928).

*Type Locality.* Cumshewa Inlet, Moresby Island, Queen Charlotte Islands, British Columbia, Canada. (Type: U.S.N.M., No. 100597.)



*Range.* "Certain islands of southeastern Alaska and British Columbia from Admiralty Island, Alaska, south to Moresby Island, Queen Charlotte group, British Columbia (except Coronation and Warren Islands, Alaska, inhabited by *Sorex o. malitosus*), including Admiralty, Baranof, Prince of Wales, Duke, Mitkof, and Forrester Islands, Alaska, and Graham, Langara, and Moresby Islands, British Columbia" (Jackson, 1928). (B.C.)

***Sorex obscurus insularis* Cowan.** BARDSWELL DUSKY SHREW. *Musaraigne obscure de l'île Bardswell.*

1941. *Sorex obscurus insularis* Cowan, Proc. Biol. Soc. Wash., vol. 54, pp. 103-104 (July 31, 1941).

*Type Locality.* Smythe Island, Bardswell group, British Columbia. (Type: Prov. Mus. B.C., No. 3110.)

*Range.* Smythe, Townsend, and Reginald Islands, British Columbia. (B.C.) (Specimens examined by Dr. Cowan—Smythe Island 29, Townsend Island 31, Reginald Island 8.)

**\**Sorex obscurus isolatus* Jackson.** VANCOUVER ISLAND DUSKY SHREW. *Musaraigne de l'île de Vancouver.*

1922. *Sorex obscurus isolatus* Jackson, Journ. Wash. Acad. Sci., vol. 12, p. 263 (June 4, 1922).

*Type Locality.* Mouth of Millstone Creek, Nanaimo, Vancouver Island, British Columbia, Canada. (Type: U.S.N.M., No. 177719.)

*Range.* All parts of Vancouver Island (Cape Scott\*, Comox\*, Cowichan Lake\*, Departure Bay\*, Nanaimo\*, Nootka\*, Port Hardy\*, Sayward\*, Shushartie\*, Upper Campbell River\*, Victoria\*). (B.C.)

**\**Sorex obscurus longicauda* (Merriam).** LONG-TAILED DUSKY SHREW. *Musaraigne obscure à queue longue.*

1895. *Sorex obscurus longicauda* Merriam, North Amer. Fauna, No. 10, p. 74 (Dec. 31, 1895).

1900. *S[orex] longicauda* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 16 (March 14, 1900).

1928. *Sorex obscurus longicauda* Jackson, North Amer. Fauna, No. 51, p. 131 (July 1928).

*Type Locality.* Wrangell, Alaska. (Type: U.S.N.M., No. 74711.)

*Range.* Coast of southeast Alaska, from Wrangell southward; also coast of Washington, including Puget Sound and Skagit Valley. Coastal region of southeastern Alaska and western British Columbia from Port Snettisham, Alaska, south to Metlakatla\*, Dean Channel\*, Bella Coola region\*, and Rivers Inlet\*, including certain adjacent islands in Alaska as Etolin, Gravina, Revillagigedo, Sergief, and Wrangell. (B.C.)

***Sorex obscurus mixtus* Hall.** TEXADA ISLAND DUSKY SHREW. *Musaraigne de l'île Texada.*

1938. *Sorex obscurus mixtus* Hall, Amer. Nat., vol. 72, No. 742, pp. 462-463 (Sept.-Oct. 1938).

*Type Locality.* Vananda, Texada Island, Strait of Georgia, British Columbia. (Type: M.V.Z., No. 70376.)

*Range.* Known only from the type locality. (B.C.)

**\**Sorex obscurus prevostensis* Osgood.** PREVOST ISLAND DUSKY SHREW. *Musaraigne obscure de l'île Prevost.*

1901. *Sorex longicauda prevostensis* Osgood, North Amer. Fauna, No. 21, p. 35 (Sept. 26, 1901).

1905. *Sorex obscurus prevostensis* Elliot, Field Columb. Mus. Publ. 105 (zool. series 6): 450.

*Type Locality.* North end of Prevost Island (Kunghit Island of some maps), on coast of Houston Stewart Channel, Queen Charlotte Islands, British Columbia. (Type: U.S.N.M., No. 100618.)

*Range.* Known only from the type locality. (B.C.)



\***Sorex obscurus setosus** Elliot. OLYMPIC DUSKY SHREW. *Musaraigne obscure des montagnes Olympe*.

1899. *Sorex setosus* Elliot, Field Columb. Mus., publ. 32, zool. ser., vol. 1, p. 274 (March 1899).

1918. *Sorex obscurus setosus* Jackson, Proc. Biol. Soc. Wash., 31; p. 127 (Nov. 29, 1918).

*Type Locality.* Happy Lake, Olympic Mountains, Clallam county, Washington. (Type: Field Mus. Nat. Hist., No. 6213/238.)

*Range.* Coastal region of southwestern British Columbia from Rivers Inlet\* and Owikeno Lake\* (about latitude 52 degrees north) south through western Washington to extreme northwest-central Oregon (Parkdale), chiefly west of the Cascade Mountains. (B.C.)

†**Sorex obscurus soperi** Anderson and Rand. PRAIRIE DUSKY SHREW. *Musaraigne obscure des Prairies*.

1945. *Sorex obscurus soperi* Anderson and Rand, Can. Mus., Field-Nat., vol. 59, No. 2, March-April 1945, p. 47 (Oct. 16, 1945).

*Type Locality.* Two and one-half miles northwest of Lake Audy, Riding Mountain National Park, southwestern Manitoba, Canada; altitude 1,740 feet; collected by J. Dewey Soper, Sept. 21, 1940; orig. No. 4264. (Type: N.M.C., No. 18249.)

*Range.* Higher wooded areas at eastern and northern edges of Great Plains region of Canada, from southwestern Manitoba (Riding Mountain National Park\*), central Saskatchewan (Prince Albert National Park), and in Cypress Hills\* in southwestern Saskatchewan. (Man., Sask., and probably extreme southeastern Alta.)

#### Subgenus *Neosorex* Baird. Water Shrews<sup>1</sup>

1857. *Neosorex* Baird, Report Pacific R. R. Survey 8; pt. 1, Mammals, p. 11 (1857). Type, *Neosorex navigator* Baird.

\***Sorex palustris palustris** Richardson. AMERICAN WATER SHREW. *Musaraigne d'eau*.

1828. *Sorex palustris* Richardson, Zool. Journ., vol. 3, p. 517.

1885. *Neosorex palustris* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).

1926. *Sorex palustris palustris* Jackson, Journ. Mamm., 8:1, p. 57 (Feb. 15, 1926).

*Type Locality.* Marshy places from Hudson Bay to the Rocky Mountains, Canada. (Type: Brit. Mus. Nat. Hist., No. 42-10.7.1.)

*Range.* Central Mackenzie district, Northwest Territories (Fort Rae, Grandin River, latitude 64 degrees north) south to northeastern British Columbia (Peace River district), east-central Alberta (Edmonton), north-central Saskatchewan (Prince Albert National Park), and central Manitoba to northwestern Minnesota and western Ontario. (Alta., B.C., Man., N.W.T., Ont., Sask.)

\***Sorex palustris albibarbis** (Cope). WHITE-LIPPED WATER SHREW. *Musaraigne à moustaches blanches*.

1862. *Neosorex albibarbis* Cope, Proc. Acad. Nat. Sci., Phila., p. 188.

1894. *Sorex albibarbis* Miller, Proc. Boston Soc. Nat. Hist., vol. 26, p. 181 (March 24, 1894).

1903. *Sorex palustris albibarbis* Rhoads, Mamm. Pennsylvania and New Jersey, p. 191.

*Type Locality.* Profile Lake, Franconia Mountains, Grafton county, New Hampshire. (Type: U.S.N.M., No. 11239/38743.)

*Range.* Western New Brunswick, southern Quebec, eastern and central Ontario, Vermont, eastern New York, south to northeastern Pennsylvania. (N.B., Ont., P.Q.)

<sup>1</sup>Jackson, Journ. Mamm., vol. 7, pp. 57-58 (Feb. 15, 1926), states that a detailed study of shrews for the U.S. Biological Survey makes it necessary to include both the water shrews and the marsh shrews in the genus *Sorex*, the water shrews in the subgenus *Neosorex* and the marsh shrews in the subgenus *Atophyraz*. For further details See Jackson, Taxonomic Review of the North Amer. Long-tailed Shrews (genera *Sorex* and *Microsorex*), North Amer. Fauna, No. 51, pp. 1-238 (1928).



†\***Sorex palustris brooksi** Anderson. VANCOUVER ISLAND WATER SHREW. *Musaraigne d'eau de l'île de Vancouver*.

1934. *Sorex palustris brooksi* Anderson, The Canadian Field-Nat., vol. 48, No. 8, Nov. 1934, p. 134 (Nov. 1, 1934).

*Type Locality.* Black Creek, 150 feet altitude, Comox district, east coast of Vancouver Island, British Columbia. (Type: N.M.C., No. 12370.)

*Range.* Known only from southern Vancouver Island, the type locality, and the lake district near Victoria. (B.C.)

\***Sorex palustris gloveralleni** Jackson. ACADIAN WATER SHREW. *Musaraigne d'eau des Maritimes*.

1915. *Neosorex palustris acadicus* G. M. Allen, Proc. Wash., vol. 28, p. 15 (April 7, 1915).

1926. *Sorex palustris gloveralleni* Jackson, Journ. Mamm., vol. 7, No. 2, p. 57 (Feb. 15, 1926).  
(The name *Sorex palustris gloveralleni* is here substituted for *Neosorex palustris acadicus* G. M. Allen, which becomes preoccupied by *Sorex acadicus* Gilpin (1867).)

*Type Locality.* Digby, Nova Scotia, Canada. (Type: M.C.Z., No. 2046, Bangs coll.)

*Range.* Nova Scotia (including Cape Breton Island), northern New Brunswick, and extreme eastern Quebec (Gaspé Peninsula) south of the St. Lawrence River. (N.B., N.S., P.Q.)

\***Sorex palustris hydrobadistes** Jackson. WISCONSIN WATER SHREW. *Musaraigne d'eau du Wisconsin*.

1926. *Sorex palustris hydrobadistes* Jackson, Journ. Mamm., vol. 7, No. 3, p. 57 (Feb. 15, 1926).

*Type Locality.* Withee, Clark county, Wisconsin. (Type: U.S.N.M., No. 229061.)

*Range.* Extreme northeastern South Dakota (Fort Sisseton), central Minnesota, easterly across northern Wisconsin and the upper peninsula of Michigan to eastern end of Lake Superior in Ontario\*. Intergrades with *S. p. palustris* in northern Minnesota and with *S. p. albibarbis* in southwestern Ontario. (Ont.)

**Sorex palustris labradorensis** Burt. LABRADOR WATER SHREW. *Musaraigne d'eau du Labrador*.

1938. *Sorex palustris labradorensis* Burt, Occasional Papers, Museum of Zoology, Univ. Mich., No. 383, pp. 1-2 (Aug. 27, 1938).

*Type Locality.* Red Bay, Strait of Belle Isle, Labrador. (Univ. Mich. Mus. Zool., No. 68109.)

*Range.* Known only from the type locality, but possibly ranges along the St. Lawrence River as far west as Godbout, Quebec. (P.Q., Labr.)

\***Sorex palustris navigator** (Baird). MOUNTAIN WATER SHREW. *Musaraigne d'eau des montagnes*.

1857. *Neosorex navigator* Baird, Mamm. N. Amer., p. 11.

1885. *Neosorex navigator* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).

1926. *Sorex palustris navigator* Jackson, Journ. Mamm., vol. 7, No. 3, p. 58 (Feb. 15, 1926).

*Type Locality.* Unknown; probably northern Idaho. (U.S.N.M., No. 629/1780.)

*Range.* From extreme northwestern British Columbia, southern Yukon (Nisutlin River\*, Rand, 1945, p. 75), and adjacent part of Alaska (Haines), approaching the coast in Bella Coola region\*, Stillwater\* and Chilliwack Valley\*, through central and southern British Columbia\*; the Rocky Mountains region of southwestern Alberta\*; through the Cascade and Olympic Mountains, and in Sierra Nevada Mountains to Mount Whitney (about latitude 36 degrees north), California, south through Idaho and eastern Oregon to central Nevada and southern Utah, and in the Rocky Mountains to northern New Mexico and west-central Arizona. (Alta., B.C., Y.T.)



Subgenus *Atophyrax* Merriam

1884. *Atophyrax* Merriam, Trans. Linn. Soc. New York, vol. 2, p. 217 (Aug. 1884). Type, *Atophyrax bendirii* Merriam.

\**Sorex bendirii bendirii* (Merriam). BENDIRE'S MARSH SHREW. *Musaraigne des marais*.

1884. *Atophyrax bendirii* Merriam, Trans. Linn. Soc. New York, vol. 2, p. 217 (Aug. 1884).  
 1912. *Neosorex bendirii bendirii* Miller, North Amer. Land Mamm. 1911, p. 22 (Dec. 31, 1912).  
 1926. *Sorex bendirii bendirii* Jackson, Journ. Mamm., vol. 7, No. 1, pp. 57-58 (Feb. 15, 1926).

*Type Locality.* Near Williamson River, 18 miles southeast of Fort Klamath, Klamath county, Oregon. (Type: U.S.N.M., No. 186442.)

*Range.* Extreme southwestern British Columbia (Chilliwack\*, Cultus Lake\*, Huntingdon\*, Port Moody), south through western Washington east and south of Puget Sound; interior southwestern Oregon; coast region of California from about latitude 41 degrees south nearly to Bodega Bay. (B.C.)

Genus *Microsorex* Coues

1877. *Microsorex* Coues, Bull. U.S. Geol. and Geogr. Surv. Terr., vol. 3, p. 646 (May 15, 1877). Type, *Sorex hoyi* Baird.

\**Microsorex hoyi hoyi* (Baird). AMERICAN PIGMY SHREW. *Musaraigne pygmée de Hoy*.

1857. *Sorex hoyi* Baird, Mamm. N. Amer., p. 32.  
 1885. *Sorex hoyi* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).  
 1910. *Microsorex hoyi* Hollister, Bull. Wis. Nat. Hist. Soc., vol. 8, p. 29 (May 7, 1910).

*Type Locality.* Racine, Racine county, Wisconsin. (Type: U.S.N.M., lectotype No. 632/1783.)

*Range.* Southeastern British Columbia, southern Alberta, southern Manitoba, and presumably southern Saskatchewan, southeast through eastern North Dakota, northeastern South Dakota, southern Minnesota, southern Wisconsin, and Michigan to extreme southern Ontario. (Alta., B.C., Man., Ont.)

*Microsorex hoyi alnorum* (Preble). ALDER PIGMY SHREW. *Musaraigne pygmée des aunes*.

1902. *Sorex (Microsorex) alnorum* Preble, North Amer. Fauna, No. 22, p. 72 (Oct. 31, 1902).  
 1912. *Microsorex alnorum* Cory, Mamm. Illinois and Wisconsin, p. 420 (Feb. 1912).  
 1928. *Microsorex hoyi alnorum* Jackson, North Amer. Fauna, No. 51, p. 208 (July 1928).

*Type Locality.* Robinson Portage (upper Hayes River about 35 miles southwest of Oxford Lake, at about latitude 54° 30' N., longitude 96° W.), Manitoba, Canada. (Type: U.S.N.M., No. 117014.)

*Range.* Northeastern Manitoba and extreme northwestern Ontario. Known only from one specimen from the type locality and forty specimens taken by Royal Ont. Mus. Zool. exped. in 1938, at Favourable Lake, Patricia district, latitude about 53° N., longitude 94° W., about 50 miles east of northwestern corner of province of Ontario. (Man., Ont.)

\**Microsorex hoyi intervectus* Jackson. NORTHERN PIGMY SHREW. *Musaraigne pygmée du Nord*.

1925. *Microsorex hoyi intervectus* Jackson, Proc. Biol. Soc. Wash., vol. 38, p. 125 (Nov. 13, 1925).

*Type Locality.* Lakewood, Oconto county, Wisconsin. (Type: U.S.N.M., No. 226979.)

*Range.* Northwest Territories from Fort Franklin, Great Bear Lake, south to Fort Rae, Fort Resolution, Fort Simpson, and Fort Smith; westerly to southern Yukon (Alaska Highway, Irons Creek\*; Canol Road, Lapie River\*; Sheldon Lake\*, Dezadeash Lake\*, Haines Road), northern British Columbia west to Telegraph Creek; northern Alberta (Slave River and Athabaska Lake), central Saskatchewan (Cumberland district and Prince Albert National Park); northern Manitoba, western Ontario (Favourable Lake and Attawapiscat Lake in Patricia



district); east and north to Quebec (Gaspé\*, Godbout, Lake Edward, and Chimo), and Hopedale on the Labrador coast. (Alta., B.C., Man., Ont., P.Q., Sask., Y.T., and Labr.)

\***Microsorex hoyi thompsoni** (Baird). THOMPSON'S PIGMY SHREW. *Musaraigne de Thompson*.

1857. *Sorex thompsoni* Baird, Rept. Pacific R.R. Surv. 8; pt. 1, Mammals, p. 34 (1857).

1925. *Microsorex hoyi thompsoni* Jackson, Proc. Biol. Soc. Wash., vol. 38, p. 126 (Nov. 13, 1925).

*Type Locality*. Burlington, Chittenden county, Vermont. (U.S.N.M., lectotype No. 1686/38838.)

*Range*. Nova Scotia, New Brunswick, and Prince Edward Island, south-westerly across Maine, New Hampshire, Vermont, New York, to eastern Ohio. (N.B., N.S., P.E.I.)

Genus *Cryptotis* Pomel. Little Short-tailed Shrews. (See Appendix, p. 215)

Genus *Blarina* Gray.<sup>1</sup> Short-tailed Shrews

1838. *Blarina* Gray, Proc. Zool. Soc. London, 1837, p. 124. Type, *Sorex talpoides* Gapper.

†\***Blarina brevicauda angusta** Anderson. GASPE SHORT-TAILED SHREW. *Musaraigne à queue courte de Gaspé*.

1943. *Blarina brevicauda angusta* Anderson, Rept. Provancher Soc. Nat. Hist. Canada, Quebec, 1942, pp. 52-53 (in French, *ibid.*, pp. 63-64) (Sept. 7, 1943).

*Type Locality*. Kelly's Camp, Berry Mountain Brook, near head of Grand Cascapedia River, Gaspé county, Quebec; altitude, about 1,600 feet. (Type: N.M.C., No. 11655.)

*Range*. Gaspé Peninsula\*, Quebec, from sea-level up to about 1,600 feet in the interior; and northwestern New Brunswick (Madawaska county, Baker Lake\*, Edmundston\*, St. Leonard\*). (N.B., P.Q.)

\***Blarina brevicauda hooperi** Bole and Moulthrop. VERMONT SHORT-TAILED SHREW. *Musaraigne à queue courte du Vermont*.

1942. *Blarina brevicauda hooperi* Bole and Moulthrop, Sci. Publ. Cleveland Mus. Nat. Hist., vol. 5, No. 6, pp. 110-112 (Sept. 11, 1942).

*Type Locality*. Lyndon, Caledonia county, Vermont (about 44 degrees north latitude, 72 degrees west longitude, about 35 miles south of Vermont-Quebec International Boundary). (Type: Univ. Mich. Mus. Zoology, No. 77380.)

*Range*. Described from thirteen specimens from type locality, but twelve specimens in National Museum of Canada from North Hatley\*, Stanstead county, Quebec, about 18 miles north of the Quebec-Vermont International Boundary are apparently referable to this subspecies. (P.Q.)

†\***Blarina brevicauda manitobensis**, new subspecies. MANITOBA SHORT-TAILED SHREW. *Musaraigne à queue courte du Manitoba*.

1823. *Sorex brevicaudus* Say, Long's Exped. Rocky Mts., vol. 1, p. 164. West bank of Missouri River, near Blair, formerly Engineer Cantonment, Washington county, Nebraska.

1857. *Blarina brevicauda* Baird, Mamm. North Amer., p. 42.

1912. *Blarina brevicauda brevicauda* Miller, North Amer. Land Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 23 (Dec. 31, 1912). (In part, by various authors for Manitoba specimens.)

*Type*. Register of Mammals, National Museum of Canada, No. 8549, male, adult, skin and skull, Max Lake, Turtle Mountains, Manitoba; latitude a little north of 49th parallel, longitude about 100 degrees west; altitude about 2,100 feet; collected by J. Dewey Soper, Oct. 29, 1929; orig. No. 1779.

*Diagnosis*. Compared with neighbouring races of the species, specimens from Manitoba average larger in both external measurements and skull measurements, with palate and rostrum broader and braincase broader and higher, and

<sup>1</sup>Revised by C. Hart Merriam, Revision of the Shrews of the American Genera *Blarina* and *Notiosorex*; North Amer. Fauna, No. 10, pp. 1-34 (Dec. 31, 1895).



colour averaging considerably darker than in *B. b. talpoides* from Rainy River, Ontario, and other points farther east in Ontario and Quebec. Comparison with specimens of *B. b. brevicauda* from east-central Nebraska (collection of the late Myron H. Swenk) and from Iowa (collection of Museum of Natural History, Univ. of Iowa) shows that Nebraska and Iowa skulls, although similar to Manitoba skulls in length and breadth, have the palate noticeably broader than in *manitobensis*. *B. b. talpoides* from Ontario and Quebec have palate narrower than in *manitobensis*, *B. b. pallida* from Nova Scotia still narrower, and *B. b. angusta* from Gaspé Peninsula, Quebec, the narrowest of all, a condition obvious even on casual inspection of series of each race. *B. b. manitobensis* has the dorsal region darker, running to dark slaty greyish, with much less brownish than in Nebraska and Iowa specimens.

*Measurements.* Type (adult male, No. 8549) and allotype (adult female, No. 8544), taken at Max Lake on October 28-29: total length, 132, 132; tail vertebrae, 27, 28; hind foot, 17, 16.5. Skull: condylobasal length, 24, 23; cranial breadth, 13, 13; palatal length, 11, 10.2; greatest palatal breadth, 8.2, 8; interorbital breadth, 6.2, 6; maxillary breadth, 8.8, 8.8; maxillary tooth-row, 9.1, 9.

*Range.* Southern Manitoba from near eastern boundary west to Turtle Mountains\*, Riding Mountain National Park\*, and Dauphin; north to Lake St. Martin and Lake Winnipegosis; probably occurs in northwestern Minnesota and northeastern North Dakota near the International Boundary. A good description has been received of two specimens taken, but not preserved, near Grenfell, Saskatchewan, about 65 miles west of the Manitoba boundary, evidently short-tailed shrews, but until authentic specimens are available it is inadvisable to add this race to the Saskatchewan list.

*Specimens examined.* Manitoba, 50: Aweme 10, Brandon 1\*, Caddy Lake 1, Dauphin 1, Delta 5, Douglas Lake, Spruce Woods Forest Reserve 1, Fort Garry 1, Kenton 1, Lake St. Martin Reserve 1, Riding Mountain National Park\* 6, Rock Lake, 50 miles west of Morden, 2, Sandilands Forest Reserve 3. Telford, near Whiteshell Forest Reserve 4, Treesbank 2, Turtle Mountains\* 7, Whiteworth 1, Winnipegosis Lake, Overflowing River 3.<sup>1</sup> (Man.)

\**Blarina brevicauda pallida* R. W. Smith. NORTHEASTERN SHORT-TAILED SHREW. *Musaraigne à queue courte du nord-est.*

1940. *Blarina brevicauda pallida* R. W. Smith, Amer. Midland Nat., Notre Dame, Indiana, vol. 24, No. 1, pp. 223-224.

*Type Locality.* Wolfville, Kings county, Nova Scotia. (Type: M.V.Z., No. 86682.)

*Range.* Nova Scotia\*, eastern New Brunswick\*, Prince Edward Island\*, and eastern Maine. (N.B., N.S., P.E.I.)

\**Blarina brevicauda talpoides* (Gapper). GAPPER'S SHORT-TAILED SHREW. *Musaraigne à queue courte.*

1830. *Sorex talpoides* Gapper, Zool. Journ., vol. 5, p. 202.

1902. *Blarina brevicauda talpoides* Bangs, Proc. N.E. Zool. Club, vol. 3, p. 75 (March 31, 1902).

1924. *Blarina brevicauda talpoides* Miller, List North Amer. Recent Mammals, in U.S. Nat. Mus., 1911, p. 24 (Dec. 31, 1912).

*Type Locality.* Between York and Lake Simcoe, Ontario, Canada. (Type: not known.)

*Range.* From Upper Mississippi River northeast to western\* and southern Ontario\* (Great Lakes region), most parts of southern Quebec\*, and western New Brunswick\*; south to Illinois, Ohio, Pennsylvania, and western North Carolina, Maryland, north to Maine. (N.B., Ont., P.Q.)

<sup>1</sup> Specimens in N.M.C. marked with (\*), one specimen each from Aweme, Dauphin, and St. Martin Lake from R.O.M.Z., Toronto, and the others from collections of Stuart Criddle of Aweme and J. Dewey Soper of Winnipeg.



Order Chiroptera.<sup>1</sup> Bats

## Suborder MICROCHIROPTERA

Family VESPERTILIONIDAE<sup>2</sup>

## Subfamily Vespertilioninae

Genus *Myotis* Kaup<sup>3</sup>

1829. *Myotis* Kaup, Skizzirte Entw.-Gesch. u natürl. Syst. europ. Thierw., vol. 1, p. 106.  
Type, *Vespertilio myotis* Borkhausen.

\****Myotis lucifugus lucifugus*** (LeConte). COMMON MOUSE-EARED BAT. LITTLE MYOTIS BAT. LITTLE BROWN BAT. *Chauve-souris brune*.

1831. *V[espertilio] lucifugus* LeConte, McMurtrie's Cuvier, Animal Kingdom, vol. 1, p. 431.  
1885. *Vespertilio lucifugus* and *Vespertilio carolii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 603 (1885).  
1897. *Myotis lucifugus* Miller, North Amer. Fauna, No. 13, p. 59 (Oct. 16, 1897).  
1900. *Myotis lucifugus lucifugus* Miller, Key Land Mamm. Northeastern North Amer., Bull. N.Y. State Mus., vol. 8, No. 38, p. 149 (Oct. 1900).

*Type Locality.* Georgia; probably the LeConte plantation, near Riceboro, Liberty county. (Type not designated.)

*Range.* The entire forested part of North America north of the southern boundary of the United States, except in the Rocky Mountain region and on the Pacific coast of California, Oregon, Washington, British Columbia, and southern Alaska. (Alta., B.C., Man., N.B., N.S., N.W.T., Ont., P.E.I., P.Q., Sask., Y.T., Labr.)

\****Myotis lucifugus alascensis*** Miller. PACIFIC MOUSE-EARED BAT. *Chauve-souris d'Alaska*.

1893. *Vespertilio gryphus lucifugus* H. Allen, Monogr. Bats North Amer., Bull. U.S. Nat. Mus., No. 43, p. 78.  
1901. *Myotis yumanensis saturatus* Osgood, North Amer. Fauna, No. 21, p. 36, Sept. 26, 1901 (not of Miller, 1897); See H. W. Grinnell, Univ. Calif. Publ. Zool., vol. 17, 1918, p. 432.  
1897. *Myotis lucifugus alascensis* Miller, North Amer. Fauna, No. 13, p. 63 (Oct. 16, 1897).

*Type Locality.* Sitka, Alaska. (Type: U.S.N.M., No. 77416.)

*Range.* In typical form in moist coastal region of western North America, from the archipelago of southern Alaska through western and central British Columbia, coastwise across western Washington and Oregon to northwest California (Humboldt county); also ranging southeastward from British Columbia\* into northern Idaho and northwestern Montana; casual in western Alberta\*. (Alta., B.C.)

\****Myotis lucifugus pernox*** Hollister. HOLLISTER'S MOUSE-EARED BAT. *Chauve-souris brune de Hollister*.

1911. *Myotis pernox* Hollister, Smiths. Misc. Coll., vol. 56, No. 26, p. 4 (Dec. 5, 1911). Henry House, Alberta.  
1928. *Myotis lucifugus alascensis* Miller and Allen, U.S. Nat. Mus., Bull. 144, p. 48 (April 18, 1928). (The specimen on which the name *pernox* was based was considered as a large richly coloured individual of *M. l. alascensis*.)  
1943. *Myotis lucifugus pernox* Crowe, Bull. Amer. Mus. Nat. Hist., vol. 80, Art. 11, pp. 395-396 (Feb. 4, 1943). (Shows that two specimens from Entrance, Alberta, 32 miles from type locality, are readily distinguished from both *M. l. lucifugus* and *M. l. alascensis* by having larger skulls; intergradation shown by two specimens from Assiniboine, B.C., referred to *alascensis* but showing a tendency toward the larger size of *pernox*.)

<sup>1</sup>Revised by Miller, Families and Genera of Bats; Bull. U.S. Nat. Mus., No. 57 (June 29, 1907).

<sup>2</sup>Revised by Miller, North American Bats of Family Vespertilionidae; North Amer. Fauna, No. 13, p. 140, Pl. 3, Figs. 40 (Oct. 1897).

<sup>3</sup>Revised by Miller, G. S., Jr., and Allen, G. M.: The American Bats of the genera *Myotis* and *Pizonyx*; U.S. Nat. Mus., Bull. 144, p. 218, figs. 15, maps 13 (April 18, 1928). (The name *Myotis* is derived from a combination of two Greek words meaning mouse and ear, from the large ears.)



*Type Locality.* Henry House, Alberta. (Type: U.S.N.M., No. 174134.)

*Range.* Rocky Mountains region of western Alberta (Jasper National Park\*), and probably also eastern British Columbia. (Alta.)

\**Myotis yumanensis saturatus* Miller. MILLER'S MOUSE-EARED BAT. *Chauve-souris de Miller.*

1897. *Myotis yumanensis saturatus* Miller, North Amer. Fauna, No. 13, p. 68 (Oct. 16, 1897).

*Type Locality.* Hamilton, Skagit county, Washington. (Type: U.S.N.M., No. 17399/24300.)

*Range.* Humid northwest coast from western British Columbia (Bella Coola area, Hagensborg\*; Bute Inlet; Chilliwack\*; Dean Channel, Hot Springs\*; Kimsquit\*; Horseshoe Lake\* near Stillwater; Howe Sound, Brackendale\*; Kamloops; Kingcome Inlet\*; King Island, Port John\*; Loughborough Inlet\*; New Westminster; Okanagan; Port Moody; Rivers Inlet\*, Shuswap, Skagit\*); Vancouver Island (Cowichan Lake\*, Duncan\*, Port Hardy\*); south to south-central California (San Obispo county) and to a varying distance inland west of the higher mountains. From the number of specimens taken this appears to be by far the commonest bat along the British Columbia coast. (B.C.)

\**Myotis yumanensis sociabilis* H. W. Grinnell. GRINNELL'S MOUSE-EARED BAT. *Chauve-souris de Grinnell.*

1914. *Myotis yumanensis sociabilis* H. W. Grinnell, Univ. Calif. Publ. Zool., vol. 12, p. 318 (Dec. 4, 1914).

*Type Locality.* Old Fort Tejon, 3,200 feet altitude, Tehachapi Mountains, Kern county, California. (Type: M.V.Z., No. 5158.)

*Range.* From southeastern British Columbia (Creston\*, Kamloops, Lehman, Okanagan Landing\*, Sicamous\*, Westbridge\*) and western Montana to the eastern base of the Cascade Mountains in central Washington and Oregon, thence southward in California (excepting the coastal strip that extends as far south as San Luis Obispo county) to the coast of the southern part of the state. (B.C.)

\**Myotis keenii keenii* (Merriam). KEEN'S MOUSE-EARED BAT. *Chauve-souris de Keen.*

1895. *Vespertilio subulatus keenii* Merriam, Amer. Nat., vol. 29, p. 860 (Sept. 1895).

1897. *Myotis subulatus keenii* Miller, North Amer. Fauna, No. 13, p. 77 (Oct. 16, 1897).

1897. *Myotis lucifugus alascensis* Miller, North Amer. Fauna, No. 13, p. 63 (Oct. 16, 1897). (In part, specimen from Wrangell, Alaska.)

1928. *Myotis keenii keenii* Miller and Allen, Bull. U.S. Nat. Mus., No. 144, pp. 101-105 (April 18, 1928).

*Type Locality.* Massett, Queen Charlotte Islands, British Columbia, Canada. (Type: U.S.N.M., No. 72922.)

*Range.* Humid northwest coast region from northern British Columbia (Dean Channel, Kimsquit\*; Queen Charlotte Islands, Massett\*; Stuié\*, Bella Coola region; Telegraph Creek; Telkwa\*) and southeastern Alaska to north-western Washington. (B.C.)

\**Myotis keenii septentrionalis* (Trouessart). TROUESSART'S MOUSE-EARED BAT. *Chauve-souris brune à longues oreilles. Chauve-souris de Trouessart.*

1897. *Vespertilio gryphus* var. *septentrionalis* Trouessart, Catal. Mamm. viv. foss., p. 131.

1897. *Myotis subulatus* Miller, North Amer. Fauna, No. 13, p. 75, figs. 13a, 15h (Oct. 16, 1897) (not of Say, 1823).—Trouessart, Catal. Mamm. viv. foss., p. 1284 (1899).

1924. *Myotis subulatus* Miller, List North Amer. Recent Mamm., 1923, Bull. U.S. Nat. Mus., No. 128, p. 72 (1924).

1928. *Myotis keenii septentrionalis* Miller and Allen, Bull. U.S. Mus., No. 144, pp. 105-110.

*Type Locality.* Halifax, Nova Scotia. (Type: U.S.N.M., No. 8188, lectotype, chosen by Miller and Allen, U.S.N.M. Bull. 144, May 25, 1928.)

*Range.* Eastern North America from Newfoundland, Nova Scotia\*, and Quebec\*, south to Tennessee and South Carolina; west to Manitoba, North Dakota, Missouri, and Arkansas. (N.B., N.S., Man., Ont., P.Q.)



**\*Myotis evotis evotis** (H. Allen). PALE BIG-EARED BAT. *Chauve-souris pâle à grandes oreilles du sud.*

1864. *Vespertilio evotis* H. Allen, Monogr. Bats North Amer.; Smiths. Misc. Coll., No. 165, figs. 42-43 (June 1864).  
 1893. *Vespertilio albescens evotis* H. Allen, Monogr. Bats North Amer.; U.S. Nat. Mus., Bull. No. 43, pp. 90-91 (1893). (Dr. Allen states "No. 31189, Easton, Wash.,...is the typical *V. evotis* of the monograph.")  
 1897. *Myotis evotis* Miller, North Amer. Fauna, No. 13, p. 78 (Oct. 16, 1897). (Type fixed as Monterey, California.)  
 1896. *Vespertilio chrysonotus* J. A. Allen, Bull. Amer. Nat. Hist., vol. 8, p. 240 (Nov. 21, 1896). (Kinney Ranch, Sweetwater county, Wyoming.)  
 1928. *Myotis evotis evotis* Miller and Allen, Bull. U.S. Nat. Mus., No. 144 (April 18, 1928). (Puget Sound, in part.)  
 1928. *Myotis evotis chrysonotus* Miller and Allen, *ibid.*, p. 116. (The name *chrysonotus* J. A. Allen is preoccupied by *evotis* H. Allen for the paler form of this species. See Dalquest, 1943, 1-2.)  
 1943. *Myotis evotis evotis* Dalquest, The systematic status of the races of the little big-eared bat, *Myotis evotis* H. Allen; Proc. Biol. Soc. Wash., vol. 56, pp. 1-2 (Feb. 25, 1943).

*Type Locality.* Easton, Kittitas county, Washington, about 55 miles inland from Puget Sound, on eastern slope of Cascade Mountains. (Type: U.S.N.M., No. 31189.)

*Range.* From Vera Cruz and lower California, Mexico, north to San Francisco, thence northeastward through northeastern California, eastern Oregon, southern Idaho, southern and eastern Montana, north to Red Deer River (near Rumsey\*, Alberta); approaching southern border of Saskatchewan, western North and South Dakota, western Nebraska, central and western Colorado, western New Mexico, and western Texas. (Alta., Sask.?)

**\*Myotis evotis pacificus** Dalquest. NORTHWESTERN BIG-EARED BAT. *Chauve-souris à grandes oreilles du nord-ouest.*

1943. *Myotis evotis pacificus* Dalquest, Proc. Biol. Soc. Wash., vol. 56, pp. 1-2 (Feb. 25, 1943).  
 1864. *Vespertilio evotis* H. Allen, Smith. Misc. Coll. No. 165, p. 48, figs. 42-43 (June 1864) (part specimens from Puget Sound).  
 1928. *Myotis evotis evotis* Miller and Allen, U.S. Nat. Mus. Bull., 144, p. 114 (April 14, 1928), part.

*Type Locality.* Three and a half miles east and 5 miles north of Yacolt, Clark county, Washington; altitude 500 feet. (Type: No. 94173, Mus. Vert. Zool., Berkeley.)

*Range.* Forested areas of southern British Columbia, north on the coast as far as head of Dean Channel (Cranbrook\*, Horseshoe Lake\* near Powell River, Kimsquit\*, Kingcome Inlet\*, Okanagan Landing\*, Shuswap, Vernon, Victoria); Rocky Mountains in western Alberta (Jasper\* and Waterton Lakes National Parks\* where *pacificus* is somewhat intermediate with *evotis*); western Washington, western Oregon, and northwestern coastal area of California. (Alta., B.C.)

**Myotis thysanodes thysanodes** Miller. FRINGED-TAILED BAT. *Chauve-souris à queue frangée.*

1897. *Myotis thysanodes* Miller, North Amer. Fauna, No. 13, p. 80 (Oct. 16, 1897).  
 1928. *Myotis thysanodes thysanodes*, Miller and Allen, U.S.N.M., Bull. 144, p. 126.

*Type Locality.* Old Fort Tejon, Tehachapi Mountains, Kern county, California. (Type: U.S.N.M., No. 29827.)

*Range.* From central and northern Mexico northward to Arizona, New Mexico, central California, and southeastern Washington to Okanagan Valley (Vernon)<sup>1</sup>, British Columbia; distribution characteristically sporadic; exact limits of range unknown. (B.C.)

<sup>1</sup>Six specimens taken from colony of thirty to forty individuals in attic at Vernon, B.C., in 1937, by T. P. Maslin (Journ. Mamm., 19:3.373).



**\*Myotis volans longicrus** (True). NORTHWESTERN LONG-LEGGED BAT. *Chauve-souris à jambes longues du nord-ouest.*

1886. *Vespertilio longicrus* True, Science, vol. 8, p. 588 (Dec. 24, 1886).  
 1897. *Myotis lucifugus longicrus* Miller, North Amer. Fauna, No. 13, p. 64.  
 1911. *Myotis altifrons* Hollister, Smith. Misc. Coll., vol. 56, No. 26, p. 3 (Dec. 5, 1911). (Henry House, Alberta.)  
 1912. *Myotis longicrus longicrus* Miller, List North Amer. Land Mamm., 1911, Bull. U.S. Nat. Mus., No. 79, p. 55 (Dec. 31, 1912).  
 1928. *Myotis volans longicrus* Miller and Allen, Bull. U.S. Nat. Mus., No. 144, pp. 14-142.

*Type Locality.* Vicinity of Puget Sound, Washington. (Type: U.S.N.M., No. 15263/22480.)

*Range.* Pacific coast region from Monterey, California, north to Admiralty Island, Alaska, and south end of Atlin Lake, northwestern British Columbia, east to Henry House east of Jasper Park, Alberta; one specimen taken at Dried Meat Lake, in central Alberta, by J. D. Soper in 1937. (Alta., B.C.)

**\*Myotis californicus californicus** (Audubon and Bachman). LITTLE CALIFORNIA BAT. *Petite chauve-souris de la Californie.*

1842. *Vespertilio californicus* Audubon and Bachman, Journ. Acad. Nat. Sci. Phila., vol. 8, pt. 2, p. 285.  
 1897. *Myotis californicus* Miller, North Amer. Fauna, No. 13, p. 69 (Oct. 16, 1897).  
 1912. *Myotis californicus californicus* Miller, List North Amer. Mamm. 1911, Bull. U.S. Nat. Mus., No. 79, p. 56 (Dec. 31, 1912).

*Type Locality.* California. (Type: none specified.)

*Range.* From about the latitude of the Tropic of Cancer in continental Mexico, and Cape St. Lucas in lower California, northward along the Pacific coast to the region of San Francisco Bay, and in the interior to the northern Sierra Nevada, eastern Oregon, and eastern Washington, north to Similkameen River Valley in southern British Columbia (Hedley 1\*; Keremeos, 2\*), eastward to western Texas, central New Mexico, and west-central Colorado; replaced by a pallid race in the Great Basin. (B.C.)

**\*Myotis californicus caurinus** Miller. NORTHWESTERN CALIFORNIA BAT. *Chauve-souris de la côte du nord.*

1897. *Myotis californicus caurinus* Miller, North Amer. Fauna, No. 13, p. 72 (Oct. 16, 1897).

*Type Locality.* Massett, Graham Island, Queen Charlotte Islands. (Type: U.S.N.M., No. 72219.)

*Range.* Humid area of the Pacific coast from the extreme south of the Alaskan Archipelago, along the coastal areas of British Columbia (Bella Coola region, Stuie\*; Rivers Inlet\*, Kingcome Inlet\*, Bute Inlet\*, Port Moody, Burrard Inlet\*, Hope\*, Chilliwack Valley\*, Queen Charlotte Islands; Vancouver Island, Comox, Cape Scott\*, Port Hardy\*), and southward along the coastal region of Washington, Oregon, and northwestern California, to the vicinity of San Francisco. (B.C.)

**\*Myotis subulatus subulatus** (Say). SAY'S MASKED BAT. *Chauve-souris masquée de Say.*

1823. *V[espertilio] subulatus* Say, Long's Exped. Rocky Mts., vol. 2, p. 65.  
 1886. *Vespertilio ciliolabrum* Merriam, Proc. Biol. Soc. Wash., vol. 4, p. 2 (near Banner, Trego county, Kansas).  
 1897. *Myotis californicus ciliolabrum* Miller, North Amer. Fauna, No. 13, p. 72 (in part).  
 1897. *Myotis subulatus* Miller, *ibid.*, p. 75 (in part).  
 1924. *Myotis subulatus subulatus* Miller, List North Amer. Recent Mamm., 1923, p. 72 (in part).  
 1928. *Myotis subulatus subulatus* Miller and Allen, Bull. U.S. Nat. Mus., No. 144, p. 72.

*Type Locality.* Arkansas River, near La Junta, Otero county, Colorado. (All trace of type specimen has been lost.)

*Range.* Arid Plains and eastern Rocky Mountain region from Kansas and southeastern Colorado north to southeastern Alberta (Red Deer River near Rumsey\*) and probably southwestern Saskatchewan. (Alta.)



\***Myotis subulatus leibii** (Audubon and Bachman). LEIB'S MASKED BAT. *Chauve-souris masquée de Leib*.

1842. *Vespertilio leibii* Audubon and Bachman, Journ. Acad. Nat. Sci. Phila., ser. 1, vol. 8, p. 284.  
 1913. *Myotis winnemanna* Nelson, Proc. Biol. Soc. Wash., vol. 26, p. 183 (Plummer Island, Md.).—Miller, List North Amer. Recent Mamm., 1923, Bull. U.S. Nat. Mus., No. 128, p. 71.  
 1928. *Myotis subulatus leibii* Miller and Allen, U.S. Nat. Mus., Bull. 144, pp. 171-174 (1928).

*Type Locality.* Erie county, Ohio. (Type not now known to be in existence.)

*Range.* From Kentucky, West Virginia, and Maryland north to Pennsylvania, New York (Sing Sing), Vermont (Brandon, Procter), southern Ontario (Mount Brydges, near London, Middlesex county) in 1931; cave near Latta, Hastings county, in 1941; Fourth Chutes cave near Renfrew county\* in 1943; 1944, and 1946; and southwestern Quebec (LaFlèche cave near Wakefield, Gatineau county\*) in 1941 and 1943; hibernating in caves. (Ont., P.Q.)

**Myotis subulatus melanorhinus** (Merriam). MERRIAM'S MASKED BAT. *Chauve-souris masquée de Merriam*.

1890. *Vespertilio melanorhinus* Merriam, North Amer. Fauna, No. 3, p. 46 (Sept. 11, 1890).  
 1886. *Vespertilio ciliolabrum* Merriam, Proc. Biol. Soc. Wash., vol. 4, p. 4 (in part; specimens from Grand county, N. Mex.).  
 1911. *Myotis californicus ciliolabrum* Cary, North Amer. Fauna, No. 33, p. 209 (part; specimen from Snake River, Routt county, Colorado).  
 1903. *Myotis orinomus* Elliot, Field Columbian Mus., publ. 79, zool. ser., vol. 3, p. 228 (La Grulla, San Pedro Mountains, lower California, Mexico, altitude 8,000 feet).  
 1928. *Myotis subulatus melanorhinus* Miller and Allen, Bull. U.S. Nat. Mus., No. 144, pp. 169-171.

*Type Locality.* Little Spring, north base of San Francisco Mountains, Coconino county, Arizona; altitude 8,250 feet. (Type: U.S.N.M., No. 18684.)

*Range.* From southern Colorado, southwestward across New Mexico, Arizona, and northern Mexico to the Pacific coast of southern California and northern lower California and northwestward into eastern Oregon and Washington, and southern British Columbia (Vaseux Lake, Okanagan Valley). (B.C.)

### Genus *Lasionycteris* Peters<sup>1</sup>

1886. *Lasionycteris* Peters, Monatsber. k. preuss. Akad. Wissensch. Berlin (1865), p. 648. Type, *Vespertilio noctivagans* LeConte.

\***Lasionycteris noctivagans** (LeConte). SILVER-HAIRED BAT. *Chauve-souris grise*.

1831. *V[espertilio] noctivagans* LeConte, McMurtrie's Cuvier, Animal Kingdom, vol. 1, p. 431.  
 1885. *Vesperugo noctivagans* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 602 (1885).  
 1894. *Lasionycteris noctivagans* H. Allen, Monogr. Bats N. Amer. (1893), p. 105 (March 14, 1894).

*Type Locality.* Eastern United States. (Type not known.)

*Range.* North America north of Mexico, from the Atlantic to the Pacific, north on British Columbia coast to northern end of Vancouver Island\* and to King Island, Dean Channel\*; migratory, probably not breeding south of Transition zone. (Alta., B.C., Man., Ont., P.Q., Sask.)

<sup>1</sup>Revised by Miller, North Amer. Fauna, No. 13, pp. 85-87 (Oct. 16, 1897).



Genus *Pipistrellus* Kaup<sup>1</sup>

1829. *Pipistrellus* Kaup, Skizzirte Entw.-Gesch. u. natürl. Syst. europ. Thierw., vol. 1, p. 98. Type, *Vespertilio pipistrellus* Schreber.

\****Pipistrellus subflavus obscurus* Miller.** DUSKY PIPISTRELLE. *Chauve-souris pipistrelle du Nord.*

1897. *Pipistrellus subflavus obscurus* Miller, North Amer. Fauna, No. 13, p. 93 (Oct. 16, 1897).

*Type Locality.* Lake George, Warren county, New York. (Type: U.S.N.M., No. 67723.)

*Range.* Along border of Transition zone and upper Austral (Carolinian) zone in central and eastern New York; southeastern Ontario (Carleton county, Ottawa, 1890; Lincoln county, Niagara-on-the-Lake, 1933; Addington county, Puzzle Lake cave; Halton county, Bronte; Hastings county, cave near Latta\*; Tyendinaga cave; Renfrew county; Fourth Chutes cave\*, 1943, 1944, and 1946; Wellington county, Rockwood); and southern Quebec (Gatineau county, LaFleche cave\*, near Wakefield, in 1941 and 1943, and Joliette, Joliette county, in January 1944); hibernating in caves. (Ont., P.Q.)

Genus *Eptesicus* Rafinesque<sup>2</sup>

1820. *Eptesicus* Rafinesque, Annals of nature, p. 2. Type, *Eptesicus melanops* Rafinesque = *Vespertilio fuscus* Beauvois.

\****Eptesicus fuscus fuscus* (Beauvois).** BIG BROWN BAT. *Grande chauve-souris brune.*

1796. *Vespertilio fuscus* Beauvois, Catal. Raisonné Mus. Peale, Phila., p. 18 (page 14 of English edition by Peale and Beauvois).  
 1885. *Vesperugo serotinus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 602 (1885) (part).  
 1894. *Adelonycteris fuscus* H. Allen, Monogr. Bats N. Amer. (1893), p. 112 (March 14, 1894).  
 1900. *Eptesicus fuscus* Méhely, Magyarország denevéreinek monographiája (Monographia Chiropterorum Hungariae), pp. 206, 338.  
 1912. *Eptesicus fuscus fuscus* Miller, North Amer. Land Mamm. in U.S.N.M., Bull. 79, p. 62 (Dec. 10, 1912).

*Type Locality.* Philadelphia, Pennsylvania. Type not known.

*Range.* Austral, Transition, and lower edge of Canadian zones from the Atlantic coast to the Great Plains north to central Quebec and Ontario and west to Manitoba. Intergrading with *E. f. pallidus* in the Prairie Provinces. Perhaps occurs in the Maritime Provinces, but no specimens available to substantiate records. (Man., Ont., P.Q.)

\****Eptesicus fuscus bernardinus* Rhoads.** PACIFIC BIG BROWN BAT. *Chauve-souris brune du Pacifique.*

1902. *Eptesicus fuscus bernardinus* Rhoads, Proc. Acad. Nat. Sci. Phila., 1901, p. 619 (Feb. 6, 1902).

*Type Locality.* Near San Bernardino, San Bernardino county, California. (Type: A.N.S. Phila., No. 1247, coll. S. N. Rhoads.)

*Range.* Humid regions of the Pacific coast from southern California north to British Columbia. This form reaches its darkest colour in extreme southwestern British Columbia (Chilliwack Valley\*, Horseshoe Lake\* near Stillwater; Howe Sound\*, Brackendale\*; Huntingdon\*, and Vancouver\*). Specimens from farther north (Stuie\*, at junction of Atnarko and Whitewater Rivers) and from the southern border at Osoyoos-Bridgesville, Summit\*, and Newgate\* are paler, showing apparent intergradation with *E. f. pallidus*, but are referred to *bernardinus*. (Rand, The Murrelet, 23:3, 1942.) (B.C.)

<sup>1</sup>Revised by Miller, North Amer. Fauna, No. 13, pp. 87-95 (Oct. 16, 1897).

<sup>2</sup>Revised (under the name *Vespertilio*) by Miller, North Amer. Fauna, No. 13, pp. 95-104 (Oct. 16, 1897). See also Allen, G. M.: Geographic Variation in the Big Brown Bat (*Eptesicus fuscus*); Can. Field-Nat., 47:2, pp. 31-32 (Feb. 1933).



\***Eptesicus fuscus pallidus** (Young). PALE BIG BROWN BAT. *Grande chauve-souris pâle*.

1908. *Eptesicus pallidus* Young, Proc. Acad. Nat. Sci. Phila., p. 408 (Oct. 14, 1908).

1912. *Eptesicus fuscus pallidus* Miller, North Amer. Land Mamm., 1911, p. 62 (Dec. 31, 1912).

*Type Locality.* Boulder, Boulder county, Colorado. (Type: U.S.N.M., No. 142526.)

*Range.* West-central United States from New Mexico and Colorado north to Alberta (Waterton Lakes\*, Red Deer River\*, Edmonton\*, Beaverhill Lake\*, and Wood Buffalo Park\*) and Saskatchewan (Regina). Intergrading with *E. f. bernardinus* in central British Columbia, and probably with *E. f. fuscus* in eastern Saskatchewan or western Manitoba. (Alta., Sask.)

### Genus *Lasiurus* Gray<sup>1</sup>

1795. *Nycteris* Cuvier and Geoffroy, Meth. Mamm., Magasin Encyclopédique, l'année, II, p. 186. Type, *Vespertilio hispidus* (= *V. hispidus* Schreber), from Africa.

1797. *Nycteris* Borkhausen, Der Zoologe (Compendiose Bibliothek gemein. nützigsten Kenntnisse für alle Stände, pt. 21), Heft 4-7, p. 66. Genotype, *Vespertilio borealis* S. L. Müller.

1803. *Nycteris* Geoffroy, Catal. Mamm. Mus. Nat. d'Hist., Paris, p. 64. Genotype, *Vespertilio hispidus* Schreber.<sup>2</sup>

1831. *Lasiurus* Gray, Zoological Miscellany, No. 1, p. 38 (based on the American hairy tailed bats). Type, *Lasiurus borealis* (Müller).

\***Lasiurus borealis borealis** (Müller). EASTERN RED BAT. *Chauve-souris rouge*.

1776. *Vespertilio borealis* Müller, Natursyst. Suppl., p. 20.

1885. *Atalapha noveboracensis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 602 (1885).

1894. *Atalapha borealis* Rhoads, Amer. Nat., vol. 28, p. 523 (June 1894).

1910. *Nycteris borealis* Hollister, Bull. Wis. Nat. Hist. Soc., vol. 8, No. 1, p. 30 (May 1910).

1912. *Nycteris borealis borealis* Miller, List North Amer. Mamm., U.S. Nat. Mus., Bull. 79 (Dec. 10, 1912).

1930. *Myotis quebecensis* Yourans, Le Naturaliste Canadien, vol. 57, No. 3, p. 65 (March 1930) (= *Lasiurus borealis borealis* Maheux, ibid., 57:10, 185-186 (Oct. 1930)).

1939. *Lasiurus borealis* Allen, G. M., Bats, Harvard Univ. Press, p. 149. (See also Allen, Checklist of African Mammals, p. 67 (Feb. 1939), under family *Nycteridae*, hollow-faced bats, of which twenty-six forms of the genus *Nycteris* are listed from Africa.)

*Type Locality.* New York. Type not known.

*Range.* Eastern North America from Canada to northern Florida and Texas; in Canada from New Brunswick (one record from Grand Manan Island), through southern Quebec, Ontario south of Lake Nipissing, southern Manitoba, west to central Saskatchewan and southern Alberta (Calgary). Migratory, usually roosting in foliage of trees. (Alta., Man., N.B., Ont., P.Q., Sask.)

\***Lasiurus borealis teliotis** (H. Allen). WESTERN RED BAT. *Chauve-souris rouge de l'ouest*.

1891. *Atalapha teliotis* H. Allen, Proc. Amer. Philos. Soc., vol. 29, p. 5 (April 10, 1891).

1897. *Lasiurus borealis teliotis* Miller, North Amer. Fauna, No. 13, p. 110 (Oct. 16, 1897).

1912. *Nycteris borealis teliotis* Miller, North Amer. Land Mamm., 1911, p. 64 (Dec. 31, 1912).

*Type Locality.* Unknown, probably some part of California. (Type: U.S.N.M., No. 84555.)

*Range.* Generally distributed from lower California north to northern California; one Canadian record (taken at Skagit\*, British Columbia, July 6, 1905, by William Spreadborough, N.M.C., No. 1182). (B.C.)

<sup>1</sup>Revised by Miller (under name *Lasiurus*), North Amer. Bats of the family Vespertilionidae; North Amer. Fauna, No. 13, pp. 105-115 (Oct. 16, 1897). Type, *Lasiurus borealis* (Müller).

<sup>2</sup>Miller, The generic name *Nycteris*: Proc. Biol. Soc. Wash., vol. 22, p. 90 (April 17, 1909), considered the generic name *Nycteris* as used for a group of Old World bats by Cuvier and Geoffroy, 1795, a *nomen nudum*, as the name was not published in this sense until 1803 by Geoffroy. In 1797 Borkhausen applied the name *Nycteris* to the New York bat of Pennant, currently known as *Lasiurus borealis*, which species Miller, therefore, placed in the genus *Nycteris*. In Opinions Rendered by the International Commission of Zoological Nomenclature, Smith, Misc. Coll., vol. 73, No. 6 (June 8, 1929), Opinion 111, decided that *Nycteris* Cuvier and Geoffroy, 1795, be placed in the Official List of Generic Names. This preoccupies the name of *Nycteris* Borkhausen (1797) as used for the North American hairy tailed bats, and validates the generic name *Lasiurus* Gray (1831) for this group.



\***Lasiurus cinereus** (Beauvois). HOARY BAT. GREAT NORTHERN BAT. *Chauve-souris cendrée*.

1796. *Vespertilio cinereus* (misspelled *linereus*) Beauvois, Catal. Raisonné Mus. Peale, Phila., p. 18 (page 15 of English edition by Beale and Beauvois).  
 1885. *Atalapha cinerea* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 602 (1885).  
 1897. *Lasiurus cinereus* Miller, North Amer. Fauna, No. 13, p. 118 (Oct. 15, 1897).  
 1910. *Nycteris cinereus* Hollister, Bull. Wis. Nat. Hist. Soc., vol. 8, No. 1, p. 30 (May 1910).  
 1939. *Lasiurus cinereus* Allen, G.M., Bats, p. 149.

*Type Locality.* Philadelphia, Pennsylvania.

*Range.* Boreal North America from Atlantic to Pacific, breeding within the Boreal zone, but in autumn and winter migrating at least to southern border of United States. Apparently rare in Maritime Provinces with one record from Nova Scotia (Halifax) and one from New Brunswick (Grand Manan); reasonably frequent in Quebec\*, Ontario\*, Manitoba\*, Saskatchewan\*, Alberta\*, and British Columbia (Vancouver\* and Victoria\*). Two specimens recorded from Northwest Territories (Resolution, 1908) and one taken at Bear Island, Southampton Island, Hudson Bay\*, June 17, 1942, the latter being the first record from north of the forested area. (Alta., B.C., Man., N.B., N.S., N.W.T., Ont., P.Q., Sask.)

#### Genus *Nycticeius* Rafinesque.<sup>1</sup> Leather-winged Bats

1819. *Nycticeius* Rafinesque, Journ. de physique, vol. 88, p. 417 (June 1819). Type, *Vespertilio humeralis* Rafinesque.

***Nycticeius humeralis*** (Rafinesque). LEATHER-WINGED BAT. RAFINESQUE'S BAT. *Chauve-souris de Rafinesque*.

1818. *Vespertilio humeralis* Rafinesque, Amer. Monthly Mag., vol. 3, p. 445 (Oct. 1818).  
 1819. *N[ycticeius] humeralis* Rafinesque, Journ. de physique, vol. 88, p. 417 (June 1819).  
 1885. *Nycticejus crepuscularis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 602 (1885).  
 1891. *Nycticejus humeralis* Thomas, Ann. and Mag. Nat. Hist., ser. 6, vol. 7, p. 528 (June 1891).  
 1912. *Nycticeius humeralis* Miller, List North Amer. Recent Mamm., U.S. Nat. Mus. Bull. 79, p. 65 (Dec. 10, 1912).

*Type Locality.* Kentucky. (Type not known to exist.)

*Range.* Austral zones in the eastern United States, west to Arkansas and southern Texas; north to extreme southwestern Ontario (one specimen taken by W. E. Saunders at Point Pelee, Essex county, May 16, 1911). (Ont.)

#### Genus *Corynorhinus* H. Allen.<sup>2</sup> Lump-nosed Bats

1865. *Corynorhinus* H. Allen, Proc. Acad. Nat. Sci. Phila., p. 173. Type, *Plecotus macrotis* LeConte.

\****Corynorhinus rafinesquii pallescens*** (Miller). PALE LUMP-NOSED BAT. *Chauve-souris pâle à nez bosselé*.

1897. *Corynorhinus macrotis pallescens* Miller, North Amer. Fauna, No. 13, p. 52 (Oct. 16, 1897).  
 1916. *Corynorhinus megalotis pallescens* G. M. Allen, Bull. Mus. Comp. Zool., vol. 60, p. 341 (April 1916).  
 1924. *Corynorhinus rafinesquii pallescens* Miller, List North Amer. Recent Mammals, 1923, p. 82 (March 18, 1924).

*Type Locality.* Keam Canyon, Navajo county, Arizona. (Type: U.S.N.M., No. 65534.)

*Range.* Western United States from western Texas, Colorado, and southwestern South Dakota to the Pacific coast of southern California, and north to south-central British Columbia (Adams River\*, northwest of Shuswap Lake; Creston\*, Kootenay River; Keremeos\*, Similkameen Valley), approaching in some extent to *C. r. townsendi*. (B.C.)

<sup>1</sup>Revised by Miller, North Amer. Fauna, No. 13, pp. 118-121 (Oct. 16, 1897).

<sup>2</sup>Revised by Miller, North Amer. Fauna, No. 13, pp. 49-54 (Oct. 16, 1897); and G. M. Allen, Bull. Mus. Comp. Zool., vol. 60, pp. 333-356 (April 1916).



\**Corynorhinus rafinesquii townsendii* (Cooper). TOWNSEND'S LUMP-NOSED BAT. *Chauve-souris à nez bosselé de Townsend*.

1837. *Plecotus townsendii* Cooper, Ann. Lyc. Nat. Hist. New York, vol. 4, p. 73 (Nov. 1837).  
 1897. *Corynorhinus macrotis townsendii* Miller, North Amer. Fauna, No. 13, p. 53 (Oct. 16, 1897).  
 1914. *Corynorhinus macrotis intermedius* H. W. Grinnell, Univ. Calif. Publ. Zool., vol. 12, p. 320 (Dec. 4, 1914). Auburn, Placer county, California; altitude 1,300 feet.  
 1916. *Corynorhinus megalotis townsendii* G. M. Allen, Bull. Mus. Comp. Zool., vol. 60, p. 344 (April 1916).  
 1924. *Corynorhinus rafinesquii townsendii* Miller, List North Amer. Recent Mammals, 1923, p. 83 (March 18, 1924).

*Type Locality.* Columbia River, Oregon.

*Range.* The humid coast region from Vancouver Island (Comox, Nanaimo Bay, Newcastle Island\*), British Columbia, southward to San Francisco, California, intergrading with *pallidus* here, as well as in north-central California and in the intermountain region farther north. (B.C.)

### Subfamily Nyctophilinae

#### Genus *Antrozous* H. Allen.<sup>1</sup> Big-eared Bats

1862. *Antrozous* H. Allen, Proc. Acad. Nat. Sci., Phila., p. 248. Type, *Vespertilio pallidus* LeConte.

*Antrozous pallidus cantwelli* Bailey. LARGE BIG-EARED BAT. *Grosse chauve-souris à grandes oreilles*.

1897. *Antrozous pallidus pacificus* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 180 (July 1, 1897). Old Fort Tejon, Tehachapi Mountains, Kern county, California. (In part; now restricted to the form found in regions west of Cascade Mountains, Sierra Nevada and San Bernardino Mountains from western Washington, Oregon, and California south into Mexico.)  
 1936. *Antrozous pallidus cantwelli* Bailey, The Mammals and Life Zones of Oregon, North Amer. Fauna, No. 55, pp. 391-393 (June 1936).

*Type Locality.* Rogersburg, Asotin county, Washington. (Type: U.S.N.M., No. 232362.)

*Range.* Upper Sonoran zone from northern Nevada, through eastern Oregon and eastern Washington, north to Okanagan Valley in southern British Columbia. One specimen examined from Kenneth Racey collection, taken by Ian McTaggart Cowan between Oliver and Okanagan Falls, July 17, 1931; another specimen reported taken at Okanagan Landing in spring of 1935. (B.C.)

### Family MOLOSSIDAE. Mastiff Bats

#### Genus *Tadarida* Rafinesque. Free-tailed Bats

1814. *Tadarida* Rafinesque, Précis des découverts somnologiques, p. 55. Type, *Cephalotes teniotis* Rafinesque.  
 1902. *Nyctinomops* Miller, Proc. Acad. Nat. Sci., Phila., p. 393 (Sept. 3, 1902). Type, *Nyctinomus femorosaccus* Merriam, 1889, North Amer. Fauna, No. 2, p. 23 (Oct. 30, 1889).

For use of the name *Tadarida* Rafinesque in place of *Nyctinomus* Oken (Lehrbuch der Naturgesch., pt. 3, vol. 2, p. 924 (1916)). See Lyon, Proc. Biol. Soc. Wash., vol. 27, pp. 217-218 (Oct. 31, 1914).

*Tadarida macrotis* (Gray). LARGE-EARED FREE-TAILED BAT. *Chauve-souris à queue libre avec grandes oreilles*.

1839. *Nyctinomus macrotis* Gray, Annals Nat. Hist., vol. 4, pp. 5-6 (Sept. 1839).  
 1894. *Nyctinomus macrotis nevadensis* H. Allen, Monogr. Bats N. Amer., 1893, p. 171 (March 14, 1894). California, exact locality unknown.  
 1924. *Tadarida macrotis* Miller, List N. Amer. Recent Mamm. (1923), p. 86 (Dec. 31, 1924). Interior of Cuba.  
 1924. *Tadarida nevadensis* Miller, List N. Amer. Recent Mamm. (1923), p. 87 (Dec. 31, 1924). California, exact locality unknown.  
 1931. *Tadarida macrotis* Shamel, Notes on the American Bats of the genus *Tadarida*, Proc. U.S. Nat. Mus., vol. 78, art. 19, pp. 1-27.

<sup>1</sup>Revised by Miller, North Amer. Fauna, No. 13, pp. 42-46 (Oct. 16, 1897).



*Type Locality.* "Collected by W. S. MacLeay in the interior of the island of Cuba, where it was found in a hollow tree. Type specimen presumably in the British Museum" (Shamel, *ibid.*, p. 16).

*Range.* "Brazil, Ecuador, Colombia, Cuba, Jamaica, Arizona, California, and Iowa" (Shamel). One additional specimen reported from San Diego, California (Huey, *Journ. Mamm.*, vol. 13, 1932, p. 160). The only Canadian record is a specimen taken in a hospital building at Essondale, near New Westminster, B.C., in November 1938. (Ian McTaggart Cowan, *Can. Field-Nat.*, vol. 59, No. 4, 1945, p. 149. December 1945.) (B.C.)

### Order Primates

#### Suborder ANTHROPOIDEA

#### Family HOMINIDAE. Men

#### Genus *Homo* Linnaeus

1758. *Homo* Linnaeus, *Syst. Nat.*, ed. 10, vol. 1, p. 20. Type, *Homo sapiens* Linnaeus.

\**Homo sapiens sapiens* Linnaeus. CAUCASIAN.

1758. [*Homo*] *sapiens* Linnaeus, *Syst. Nat.*, ed. 10, vol. 1, p. 20.

*Type Locality.* Upsala, Sweden. Range now almost cosmopolitan.

*Range.* Non-native, but established by immigration, the first permanent settlers coming in 1608; now established in most parts of Canada, except some of the Arctic islands. Grinnell (1933, *Review of the Recent Mammal Fauna of California*, Univ. Calif. Publ. Zool., vol. 40, No. 2, p. 118) characterizes this race as "Disposition aggressive and tendencies destructive, especially of natural habitats, as result of which much of native mammal life, including the endemic race of man (*H. s. americanus*), has been reduced; indeed, some species and subspecies have already disappeared as a result directly or indirectly of the white man's activities." (All provinces, territories, and districts of Canada.)

*Homo sapiens afer* Linnaeus. NEGRO. Nègre.

1758. [*Homo sapiens*] *afer* Linnaeus, *Syst. Nat.*, ed. 10, vol. 1, p. 22.

*Type Locality.* Africa. Introduced and widely established in North America.

*Range.* Non-native. Few in the early colonial days. Small numbers came to Eastern Canada with immigrants from the Southern States towards end of eighteenth century, to some extent later by immigration from the United States and West Indies.

\**Homo sapiens americanus* Linnaeus. AMERICAN INDIAN. RED MAN. Indien.

1758. [*Homo sapiens*] *americanus* Linnaeus, *Syst. Nat.*, ed. 10, vol. 1, p. 20.

*Type Locality.* Eastern North America.

*Range.* The native races of *Homo sapiens*. Formerly widely distributed in Canada where living was possible under primitive conditions, but with many local variants, cultures, and tribes. Now gone from many parts of former range, reduced in numbers in other districts, but progressing in other sections. (All provinces, territories, and districts of Canada, except Franklin district.)

*Homo sapiens asiaticus* Linnaeus. MONGOLIAN (Chinese, Japanese, etc.).

1758. [*Homo sapiens*] *asiaticus* Linnaeus, *Systema Naturae*, ed. 10, 1, 1758:21.

*Type Locality.* Asia.

*Range.* Non-native; now established in moderate numbers by voluntary immigration, but began to arrive only long after the first Caucasians and Africans. Many ethnologists consider the Eskimos of Arctic America as descendants of pre-Columbian immigration of *asiaticus* stock, and the same may be said of the origin of the so-called endemic races of *americanus*.



Order **Carnivora**. CarnivoresFamily **PROCYONIDAE**. Raccoons and their kin<sup>1</sup>Genus *Procyon* Storr. Raccoons

1780. *Procyon* Storr, Prodr. Meth. Mamm., p. 35. Type, *Ursus lotor* Linnaeus.

Regarded by Pocock (1921, op. cit., p. 422) as the type of a special subfamily, the Procyoninae.

Subgenus *Procyon* Storr

\****Procyon lotor lotor*** (Linnaeus). EASTERN RACCOON. *Raton commun*.

1758. [*Ursus*] *lotor* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 48.

1819. *Procyon lotor* Desmarest, Dict. hist. nat., vol. 29, p. 91.

1885. *Procyon lotor* True, U.S. Nat. Mus., vol. 7 (1884) p. 608 (1885). (In part.)

1911. *Pr[ocyon] hudsonicus* Brass, Aus dem Reiche der Pelze, p. 564 (April 1911). Hudson Bay region.

*Type Locality*. Eastern United States. (No type designated.)

*Range*. Over most of northeastern and central United States; in Canada restricted to Nova Scotia, southern New Brunswick, southern Quebec, southern and central Ontario (casual records at Parry Sound, Nipigon, and Attawapiscat Lake). Introduced in Prince Edward Island, mostly by escapes from fur farms; rare. Apparently extending its range, if not increasing in numbers. (N.B., N.S., Ont., P.E.I., P.Q.)

***Procyon lotor hirtus*** Nelson and Goldman. UPPER MISSISSIPPI VALLEY RACCOON. *Raton de la vallée supérieure du Mississipi*.

1930. *Procyon lotor hirtus* Nelson and Goldman, Journ. Mamm., vol. 11, pp. 455-456 (Nov. 11, 1930).

*Type Locality*. Elk River, Sherburne county, Minnesota. (Type: U.S.N.M., No. 187926.)

*Range*. Upper Mississippi and Missouri drainage areas from the eastern slopes of the Rocky Mountains east to Lake Michigan, and from southern Manitoba south to Oklahoma. Occasional records from southern Manitoba (one skull determined by examination), southern Saskatchewan (Fort Ellice, Pine Creek, Regina), and Alberta (Banff, Ponoka, Red Deer River), but casual records should be carefully examined considering the possibility of escaped pets or animals from other geographical areas being involved.

(General characters of *P. l. hirtus*: a large, dark subspecies, similar to the eastern raccoon, but much larger, pelage longer and usually more diffused with ochraceous buff; skull with high, narrow frontal region, and weak or obsolescent postorbital processes.) (Alta., Man., Sask.)

\****Procyon lotor pacifica*** Merriam. NORTHWEST RACCOON. *Raton de la côte du nord-ouest*.

1899. *Procyon psora pacifica* Merriam, North Amer. Fauna, No. 16, p. 107 (Oct. 23, 1899).

1911. ?*Procyon proteus* Brass, Aus dem Reiche der Pelze, p. 564. West coast from Puget Sound to the Cascade Mountains. (Not of Allen, 1904.)

1928. *Procyon lotor pacifica* Anthony, Field Book North Amer. Mammals, p. 88. (1928).

*Type Locality*. Lake Keechelus, Kittitas county, Washington. (Type: U.S.N.M., No. 93137.)

*Range*. Pacific mainland coast of British Columbia west of Cascade Mountains from Strait of Georgia south along west coast of Washington and Oregon to Pitt River, Shasta county, California. Specimens in National Museum of Canada from British Columbia (Brackendale\*, Howe Sound, Chilliwack Valley\*). (B.C.)

(Darker than the eastern forms, and with usually six black rings on tail not broken on under side, and with pale rings more narrow.)

<sup>1</sup>Genera revised by Hollister, N., The Genera and Subgenera of Raccoons and Their Allies; Proc. U.S. Nat. Mus., vol. 49, pp. 143-150 (Aug. 13, 1915); and by Pocock, R. I., The External Characters and Classification of the Procyonidae, Proc. Zool. Soc. London, 1921, pp. 389-422 (June 1921). See also Nelson, E. W., and Goldman, E. A., Six New Raccoons of the *Procyon lotor* group; Jour. Mamm., vol. 11, pp. 453-459 (Nov. 11, 1930); and Allen, G. M., Mammals of China and Mongolia; vol. 11, pt. 1, pp. 313-314 (Sept. 2, 1838).



\**Procyon lotor vancouverensis* Nelson and Goldman. VANCOUVER ISLAND RACCOON.  
*Raton de l'île de Vancouver.*

1930. *Procyon lotor vancouverensis* Nelson and Goldman, Journ. Mamm., vol. 11, pp. 458-459 (Nov. 11, 1930).

*Type Locality.* Quatsino Sound, Vancouver Island, British Columbia.  
(Type: U.S.N.M., No. 135457.)

*Range.* Known only from Vancouver Island and adjacent small islands. Two specimens in N.M.C. from Kilderan\* and Village Isles, Barclay Sound\*, on southwest coast of Vancouver Island. (B.C.)

(Smaller and darker than *P. l. pacifica*, with guard hairs blackish rather than dark brownish; tail with usually six black rings and black tip.)

### Family URSIDAE. Bears

#### Genus *Euarctos* Gray. Black Bears

- 1865. *Euarctos* Gray, Proc. Zool. Soc. London, 1864, p. 692 (as subgenus of *Ursus*). Type, *Ursus americanus* Pallas.
- 1896. *Euarctos* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 65 (as subgenus of *Ursus*).
- 1918. *Euarctos* Pocock, Ann. Mag. Nat. Hist., ser. 9, vol. 1, p. 384 (as a genus).
- 1928. *Euarctos* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, pp. 243-250 (as subgenus of *Ursus*). Lists all the western American black bears as subspecies of *Ursus americanus*.
- 1938. *Euarctos* Allen, G.M., The Mammals of China and Mongolia, Nat. Hist. of Central Asia, vol. 11, pt. 1, Amer. Mus. Nat. Hist., New York, pp. 330-332 (Sept. 2, 1938). Under *Ursus*, *ibid.*, pp. 325-326, he discusses and summarizes the essential characters separating the genus *Euarctos* from the genus *Ursus* as now restricted to the brown bears of Europe (type *Ursus arctos*) and the North American brown and grizzly bears, and (p. 332) places the Asiatic black bears of the *thibetanus* group as congeneric with *Euarctos*, adding that "To place them in different genera is to rely on characters that separate them specifically only, as well as to obscure very obvious relationships that are of value in tracing the derivation of the faunal elements of northern Asia and North America."
- 1945. *Euarctos* Anderson, Summary of Canadian Black Bears with description of two new northwestern species; Ann. Rept. Provancher Society of Natural History of Canada, Quebec, pp. 17-33, French 33-52 (Nov. 2, 1945).

\**Euarctos americanus americanus* Pallas. AMERICAN BLACK BEAR. *Ours noir d'Amérique.*

- 1780. *Ursus americanus* Pallas, Spicilegia zoologica, fasc. 14, p. 5.
- 1885. *Ursus americanus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 608 (1885).
- 1898. *Ursus (Euarctos) americanus sornborgeri* Bangs, Amer. Nat., vol. 32, p. 500 (July 1898). Okkak, Labrador, Canada (See Bangs, in Grenfell's Labrador, the Country and the People, p. 467, 1909, and Allen, Bull. Amer. Mus. Nat. Hist., vol. 28, pp. 1-5 (Jan. 5, 1910)).
- 1913. *Ursus arctos schwenki* Shoemaker, Stories of Great Pennsylvania Hunters, p. 25. (Union county, Pennsylvania. Some trimmings from the skin on which this name was based are in the U.S. National Museum.)
- 1918. *Eu[arctos] americanus* Pocock, Ann. and Mag. Nat. Hist., ser. 9, vol. 1, p. 384 (May 1918).
- 1924. *Euarctos americanus americanus* Miller, List North Amer. Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 90 (March 18, 1924).
- 1928. *Ursus americanus americanus* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, p. 232 (March 2, 1928).
- 1945. *Euarctos americanus americanus* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, 1944, p. 25 (Nov. 2, 1945).

*Type Locality.* Eastern North America.

*Range.* Wooded districts of North America from Nova Scotia and Labrador west to the foothills of the Rocky Mountains and southern part of Northwest Territories. (Alta., Man., N.B., N.S., Ont., P.Q., Sask.)



**\*Euarctos americanus altifrontalis** Elliot. OLYMPIC BLACK BEAR. *Ours noir des montagnes Olympe*.

1903. *Ursus altifrontalis* Elliot, Field Columb. Mus., publ. 80, zool. ser., vol. 3, p. 234 (June 1903).  
 1924. *Euarctos altifrontalis* Miller, List North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 90 (March 18, 1924).  
 1928. *Ursus americanus altifrontalis* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, p. 232 (March 2, 1928).  
 1945. *Euarctos americanus altifrontalis*, Anderson, Ann. Rept. Provancher Soc., 1944, p. 27 (Nov. 2, 1945).

*Type Locality.* Lake Crescent, Olympic Mountains, Clallam county, Washington. (Type: Chicago Mus. Nat. Hist., catalogue number not designated.)

*Range.* From northwestern California, western Oregon, western Washington, along the southwestern coast of British Columbia north to Rivers Inlet\* and Bella Coola\* region, and in the interior east to Yahk\*, and Glacier National Park, and north to Barkerville region. (B.C.)

**\*Euarctos americanus cinnamomum** (Audubon and Bachman). ROCKY MOUNTAIN BLACK BEAR. *Ours noir des Rocheuses*.

1854. *Ursus americanus* var. *cinnamomum* Audubon and Bachman, Quadr. N. Amer., vol. 3, p. 125.  
 1893. *Ursus cinnamomeus* Brown, Forest and Stream, vol. 41, p. 519 (Dec. 16, 1893). (In part.)  
 1924. *Euarctos cinnamomum* Miller, List North Amer. Recent Mammals, 1923, U.S. Nat. Mus., Bull. 128, p. 91 (March 18, 1924).  
 1945. *E. a. cinnamomum* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, 1944, p. 23 (Nov. 2, 1945).

*Type Locality.* Northern Rocky Mountains. (See Merriam, Proc. Biol. Soc. Wash., vol. 8, p. 151 (Dec. 29, 1893).)

*Range.* Northern Rocky Mountains from Yellowstone National Park, Wyoming, to western Alberta (Waterton Lakes\*, Banff\*, and Jasper\* National Parks), and eastern British Columbia (Glacier National Park\*, Morrissey\*, and Yoho National Park\*), intergrading with *E. a. altifrontalis* in the interior of southern British Columbia; northern limits of range undetermined. (Alta., B.C.)

**\*Euarctos americanus kermodei** Hornaday. KERMODE'S BLACK BEAR. *Ours noir de Kermode*.<sup>1</sup>

1905. *Ursus kermodei* Hornaday, Ninth Ann. Rept. N.Y. Zool. Soc. (1904), p. 82 (Jan. 1905).  
 1924. *Euarctos kermodei* Miller, List North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 92 (March 18, 1924).  
 1928. *Ursus americanus kermodei* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, p. 234 (March 2, 1928). (Hall, loc. cit., pp. 232-234, considers the originally described white bear, *Ursus kermodei* Hornaday, as a white colour phase (not albino), and, consequently, the name should be applied to the black bears of this region that have similar cranial characters.)  
 1944. *Euarctos americanus kermodei* Anderson, Ann. Rept. Provancher Soc., 1944, p. 28 (Nov. 2, 1945).

*Type Locality.* Gribble Island, British Columbia, Canada. (Type: Prov. Mus. B.C., No. 1369.)

*Range.* Coastal region of British Columbia from north of Nass River\* south to South Bentinck Arm, inhabiting most of the larger islands. (B.C.)

<sup>1</sup>Named in honour of Francis Kermode, for many years director of the Provincial Museum at Victoria, who made extensive investigations on the status of this bear as well as of other problems connected with the fauna of British Columbia.



‡\***Euarctos carlottae** Osgood. QUEEN CHARLOTTE BLACK BEAR. *Ours noir de la reine Charlotte*.

1901. *Ursus (Euarctos) carlottae* Osgood, North Amer. Fauna, No. 21, p. 30 (Sept. 26, 1901).  
 1924. *Euarctos carlottae* Miller, List North Amer. Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 91 (March 18, 1924).  
 1928. *Ursus americanus carlottae* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, p. 235 (March 2, 1928).  
 1945. *Ursus carlottae* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, p. 32 (Nov. 2, 1945).

*Type Locality.* Massett, Graham Island, Queen Charlotte Islands, British Columbia, Canada. (Type: U.S.N.M., No. 87620.)

*Range.* Restricted to Queen Charlotte Islands, British Columbia. Specimens only from Graham Island (Masset\*), but probably occurs on Moresby Island as well.<sup>1</sup> (B.C.)

†\***Euarctos hunteri**<sup>2</sup> Anderson. BIG NORTHWESTERN BLACK BEAR. *Gros ours noir du nord-ouest*.

1945. *Euarctos hunteri* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, 1944, p. 22 (Nov. 2, 1945).

*Type Locality.* Near mouth of Prairie Creek, South Nahanni River, Mackenzie district, Northwest Territories, Canada; latitude about 61° 30' north, longitude about 124° 30' west; collected by Fenley Hunter, August 10, 1928. (Type: N.M.C., No. 9577.)

*Range.* Western part of Mackenzie district, Northwest Territories, probably the prevailing form of black bear from Liard River northward to near the limit of trees north of the Arctic Circle; westward into central and southern Yukon at least to Teslin Lake; Canol Road (Mile 139\*, Pelly River near junction with Ross River; Nisutlin River\* 24 miles from Johnson Crossing); mountains back of Teslin Lake\*; probably also parts of extreme northern British Columbia north of Liard River and south of Teslin Lake. (N.W.T., Y.T.)

†\***Euarctos randi** Anderson. LITTLE YUKON BLACK BEAR. *Petit ours noir du Yukon*.

1945. *Euarctos randi* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, 1944, p. 19 (Nov. 2, 1945).

*Type Locality.* Sheldon Mountain, Canol Road, Mile 222, Yukon, Canada; latitude about 62° 30' north, longitude 131° west; altitude, about 4,000 feet; collected August 2, 1944, by Austin L. Rand; orig. No. R494. (Type: N.M.C., No. 17597.)

*Range.* Central and southern Yukon from western slope of Mackenzie Mountains, north and west to Klondike region\*, Hootalinqua River\*, Nisutlin River\*, and Teslin Lake; southwest into British Columbia to head of Teslin Lake\* and Snowden Mountains\* southwest of Teslin Lake; probably occurs also in parts of southwestern Mackenzie district in Northwest Territories. (B.C., Y.T.)

\***Euarctos vancouveri** Hall. VANCOUVER ISLAND BLACK BEAR. *Ours noir de l'île de Vancouver*.

1928. *Ursus americanus vancouveri* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, pp. 231-233, Pls. 12, 13.  
 1945. *Euarctos vancouveri* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, p. 29 (Nov. 2, 1945).

*Type Locality.* King Solomons Basin, Vancouver Island, British Columbia, Canada. (Type: M.V.Z., No. 12461.)

*Range.* Restricted to Vancouver Island, British Columbia, where it is common and generally distributed. (B.C.)

<sup>1</sup>Osgood, Nat. Hist. Queen Charlotte Islands, North Amer. Fauna, No. 21, p. 32 (1901), noted signs at head of Cumshewa Inlet, Moresby Island.

<sup>2</sup>Named in honour of Fenley Hunter, of Flushing, N.Y., well known as an historical explorer and hunter in Dease River region in northern British Columbia, Frances River region in southeastern Yukon, and the Nahanni Mountains in Mackenzie district, Northwest Territories; author of Frances Lake Yukon (1924), an interesting and well illustrated narrative of his 1923 expedition.



Genus *Ursus* Linnaeus. Grizzly and Big Brown Bears<sup>1</sup>

1758. *Ursus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 47. Type, *Ursus arctos* Linnaeus.  
 1825. *Danis* Gray, Ann. Philos., vol. 26, p. 60 (July 1825). Type, *Ursus ferox* Desmarest  
 = *Ursus horribilis* Ord.  
 1918. *Vetularctos* Merriam, North Amer. Fauna, No. 41, p. 131 (Feb. 9, 1918). Type,  
*Vetularctos inopinatus* Merriam.

*horribilis* group

\**Ursus horribilis horribilis* Ord. BIG PLAINS GRIZZLY. *Ours gris des Plaines*.<sup>2</sup>

1815. *Ursus horribilis* Ord, Guthrie's geography, 2d Amer. ed., vol. 2, p. 291, described on  
 p. 299.  
 1885. *Ursus horribilis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 608 (1885). (Part.)

*Type Locality.* Missouri River, a little above mouth of Poplar River, north-eastern Montana.

*Range.* Great Plains bordering Missouri River in eastern Montana and the Dakotas as well as the Plains region of southwestern Manitoba, Saskatchewan, and Alberta in former times; now probably extinct. One cranium in National Museum of Canada, found near Bigstick lake\*, Maple Creek district, in 1921, two crania found near Shaunavon\* about 1926, in southwestern Saskatchewan, and two large pieces of cranium found on Sandhill Creek\*, Red Deer River, Alberta, in 1917. (Alta., Man., Sask.)

\**Ursus horribilis dusorgus* Merriam. NORTHERN ROCKY MOUNTAIN GRIZZLY. RINDSFOOS GRIZZLY.<sup>3</sup> *Ours gris des Rocheuses du nord*.

1918. *Ursus dusorgus* Merriam, North Amer. Fauna, No. 41, p. 33 (Feb. 9, 1918).

*Type Locality.* Head of Jackpine River, near Mount Bess, close to British Columbia interprovincial boundary, Alberta, Canada. (Type: U.S.N.M., No. 217426.)

*Range.* Rocky Mountain region of western Alberta and eastern British Columbia. Known only from the type locality in western Alberta and from one adult male specimen killed near Sherbrooke Lake in Yoho National Park on western slope of Rocky Mountains in eastern British Columbia, June 17, 1944 (N.M.C., No. 18234). Measurements by collector, total length, 7 feet 4 inches (=2,234 mm.); height at shoulders, 4 feet 6 inches (=1,371 mm.). Greatest length of skull (measured in N.M.C.) 372 mm., zygomatic breadth 233 mm., width across postorbital processes, 125 mm.; showing general characters given for *dusorgus*, but showing approach in some respects to *horribilis* and *imperator*, apparently justifying giving it only subspecific rank. (Alta., B.C.)

*Ursus horribilis imperator* Merriam. BIG YELLOWSTONE PARK GRIZZLY. EMPEROR GRIZZLY. SILVERTIP. *Ours gris du parc Yellowstone*.

1914. *Ursus imperator* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 180 (Aug. 13, 1914).  
 1918. *Ursus horribilis imperator* Merriam, North Amer. Fauna, No. 41, p. 20 (Feb. 9, 1918).

*Type Locality.* Yellowstone National Park, Wyoming. (Type: U.S.N.M., No. 176297.)

<sup>1</sup>Revised by Dr. C. Hart Merriam, Review of the Grizzly and Big Brown Bears of North America (Genus *Ursus*), North Amer. Fauna, No. 41, pp. 1-136, Pls. 16 (Feb. 9, 1918). Up to that date 82 forms had been described in this genus (68 as "full species" and 14 as subspecies), in a classification stated to be "provisional," but the relationships of many of these forms have never been thoroughly worked out. Many of them were described from single specimens, some from skulls only and with no diagnosis of external characters. Changes in their systematic status will undoubtedly be proposed if sufficient suitable material becomes available before some of the races become extinct, but the general killing of grizzlies in all districts except mountain areas difficult of access will probably leave many taxonomic problems unsettled. Names based on a single type specimen, particularly in a group as variable as the bears, need to be further considered with attention to possible range of individual variation in certain characters. Preliminary studies made on larger series of specimens have shown that some of the forms originally described as species are perhaps better referable to subspecific rank. Merriam's subdivision of the genus into "groups" with skull characters apparently morphologically similar is followed here.

<sup>2</sup>The "white bear" of Lewis and Clark (observed on upper Missouri); frequent in Manitoba at beginning of the last century, before the Plains Indians were armed with effective firearms (See "The Manuscript Journals of Alexander Henry, 1799-1814", by Elliot Coues, 1897). Merriam (1918, pp. 17-18) designated as toptype a large male (U.S.N.M., No. 202739) killed at Breaks of the Missouri River, about 100 miles north of Fort Miles, eastern Montana, April 4, 1890.

<sup>3</sup>Named by Dr. C. Hart Merriam in honour of William Rindsfoos, the collector of the type specimen.



*Range.* Common in Yellowstone National Park, Wyoming; a large grizzly, with limits of range unknown; considered by Bailey (1918, Wild Animals of Glacier National Park; Montana Dept. Interior, Nat. Park Service, Washington, p. 96) to be one of the two or three species of grizzly bears occurring in the Glacier Park region lying south of Waterton Lakes National Park in southwestern Alberta. There are several records of very large grizzlies occasionally taken in the foothills of the latter region presumably belonging to the *horribilis* group, but the first Canadian record of *U. h. imperator* that is available appears to be an adult male killed by R. W. H. Eben-Ebenan in Prairie Creek Valley (sec. 17-71-7-5), Nov. 6, 1944. Measurements by collector, "total length over all from tip to tip along the back with fur, 90 inches" (=2,286 mm.); "skeleton over all from tail tip to first vertebra, 67 inches (without head); with head added about 82 inches" (=2,083.2 mm.). Skull examined by courtesy of Prof. William Rowan; cast made in N.M.C. Greatest length of skull (measured in N.M.C.) 412 mm., zygomatic breadth 229 mm., width across postorbital processes, 131 mm. (Alta.)

\***Ursus atnarko** Merriam. ATNARKO GRIZZLY. *Ours gris de la rivière Atnarko.*

1918. *Ursus atnarko* Merriam, North Amer. Fauna, No. 41, p. 22 (Feb. 9, 1918).

*Type Locality.* Lonesome Lake, Atnarko River, one of the upper forks of the Bella Coola, British Columbia, Canada. (Type: U.S.N.M., No. 211452.)<sup>1</sup>

*Range.* Mountains inland from Bella Coola area (known only from four specimens from Atnarko River in U.S.N.M. and one in N.M.C. from Stuié\* at mouth of Atnarko River). (B.C.)

**Ursus chelidonias** Merriam. JERVIS INLET GRIZZLY. *Ours gris du passage Jervis.*

1918. *Ursus chelidonias* Merriam, North Amer. Fauna, No. 41, p. 21 (Feb. 9, 1918).

*Type Locality.* Head of Jervis Inlet, British Columbia, Canada. (Type: U.S.N.M., No. 223133.)

*Range.* Apparently known only by one adult male specimen from the type locality. Described by Merriam as "very large....requires comparison with only two species, *imperator* and *warburtoni*". (B.C.)

**Ursus kwakiutl** Merriam. KWAKIUTL GRIZZLY. *Ours gris des Kwakiutl.*

1916. *Ursus kwakiutl* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 143 (Sept. 6, 1916).

*Type Locality.* Jervis Inlet, coast of southern British Columbia, Canada. (Type: U.S.N.M., No. 211748.)

*Range.* Coast region of British Columbia from southwestern corner (Burrard Inlet, Howe Sound, Jervis Inlet) northwesterly to or beyond the lower Bella Coola (Kwatna, on the lower Bella Coola). (B.C.)

\***Ursus warburtoni** (Merriam). WARBURTON PIKE GRIZZLY.<sup>2</sup> *Ours gris de Pike.*

1916. *Ursus kwakiutl warburtoni* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 145 (Sept. 6, 1916).

1918. *Ursus warburtoni* Merriam, North Amer. Fauna, No. 41, p. 27 (Feb. 9, 1918).

*Type Locality.* Atnarko River, British Columbia, Canada. (Type: U.S.N.M., No. 210576.)

*Range.* Coast region (but perhaps not the immediate coast strip) of southeastern Alaska and adjacent parts of British Columbia from Chilkat River southeasterly to Atnarko River, one of the upper forks of the Bella Coola (skulls of adult males examined by Merriam from Atnarko River, Stikine River, Iskut River near junction with Stikine, and Chilkat River Valley). Two adult skulls in N.M.C. from Hagensborg\*, Bella Coola River.

<sup>1</sup>Lonesome Lake is about 30 miles from the junction of the Whitewater, or Talchawko, and the Atnarko, which two rivers unite to form the Bella Coola. The Bella Coola is about 45 miles long. Lonesome Lake is nearly on the 52nd parallel, and by the river about 75 miles from the head of Burke Channel.

<sup>2</sup>Named in honour of Warburton Pike (1861-1915), author of "The Barren Grounds of Northern Canada", and "The Subarctic Forest", a well-known English explorer and big game hunter in the Northwest Territories and British Columbia.



*planiceps* group

**\**Ursus canadensis canadensis* Merriam.** CANADA GRIZZLY. *Ours gris du Canada.*

1914. *Ursus shoshone canadensis* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 184 (August 13, 1914).  
 1916. *Ursus ophrus* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 149. Eastern British Columbia, Canada, exact locality unknown (Sept. 6, 1916).  
 1918. *Ursus canadensis* Merriam, North Amer. Fauna, No. 41, p. 52 (Feb. 9, 1918).

*Type Locality.* Moose Pass, near Mount Robson, British Columbia. (Type: U.S.N.M., No. 174511.)

*Range.* Southeastern British Columbia from Mount Robson (Moose Pass and Sheep Creek\*) to Kootenay Lake, and Rocky Mountains of western Alberta in Jasper National Park and Banff National Park (Panther River\*); limits of range not known. Intergrades with *U. c. rungiusi* in region between Banff and Waterton Lakes National Parks. (Alta., B.C.)

**\**Ursus canadensis rungiusi* Merriam.** RUNGIUS' GRIZZLY.<sup>1</sup> *Ours gris de Rungius.*

1918. *Ursus rungiusi rungiusi* Merriam, North Amer. Fauna, No. 41, p. 49 (Feb. 9, 1918).

*Type Locality.* Rocky Mountains on headwaters of Athabaska River, Alberta, Canada. (Type: U.S.N.M., No. 179893.)

*Range.* Southwestern Alberta (Waterton Lakes National Park\*) and Kootenay Pass\* (Alberta-British Columbia interprovincial boundary); limits of range in British Columbia not known. Hall (1834, Univ. Calif. Publ. Zool., 40: 9, 366) provisionally refers Bowron Lake region, B.C., specimens to *rungiusi*. (Alta., B.C.)

***Ursus canadensis sagittalis* Merriam.** CRESTED GRIZZLY. *Ours gris huppé.*

1918. *Ursus rungiusi sagittalis* Merriam, North Amer. Fauna, No. 41, p. 50 (Feb. 9, 1918).

*Type Locality.* Champagne Landing, southwestern Yukon, Canada. (Type: U.S.N.M., No. 210705.)

*Range.* Apparently known only from the type locality. (Y.T.)

**\**Ursus macfarlani* Merriam.** MACFARLANE GRIZZLY. *Ours gris de MacFarlane.*<sup>2</sup>

1918. *Ursus macfarlani* Merriam, North Amer. Fauna, No. 41, p. 51 (Feb. 9, 1918).

*Type Locality.* On Anderson River, 50 miles below Fort Anderson, Mackenzie district, Northwest Territories, Canada. (Type: U.S.N.M., No. 6551.)

*Range.* Arctic coastal region of Mackenzie district from Coronation Gulf (Kogaryuak\* and Rae\* Rivers), to Dolphin and Union Strait (Stapylton Bay\*), Franklin Bay, Anderson River, and eastern parts of Mackenzie River delta (Kittigazuit\* and Richards Island\*). A considerably smaller animal with much shorter snout, and with fore claws much shorter, less curved, and darker than in the much larger *U. richardsoni* that inhabits much of the same range. (N.W.T., in Mackenzie district.)

<sup>1</sup>Named in honour of Carl Rungius, the well-known big game and animal artist, who collected the type specimen of this species and presented it to the U.S. National Museum.

<sup>2</sup>Named in honour of Roderick Ross MacFarlane (1833-1920), former chief factor of the Hudson's Bay Company, explorer and life-long naturalist, who contributed to science the first information on the mammals and birds of large sections of the Canadian arctic and subarctic regions, particularly the Anderson River region east of the Mackenzie; author of various papers on Canadian mammals and birds, including "Notes on Mammals collected and observed in the Northern Mackenzie District, Northwest Territories of Canada, with remarks on explorers and explorations of the Far North"; Proc. U.S. Nat. Mus., vol. 28, 1892, pp. 673-764. His manuscript catalogues, which are preserved in the U.S. National Museum, show that he preserved over 5,000 specimens of mammals and birds in that region between 1859 and 1866. The type of *Ursus macfarlani* was collected by him on May 8, 1863.



**\*Ursus pallas** Merriam. PALLAS' GRIZZLY. *Ours gris de Pallas*.<sup>1</sup>

1916. *Ursus pallas* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 149 (Sept. 6, 1916).

*Type Locality.* Donjek River, southwestern Yukon, Canada. (Type: U.S.N.M., No. 205160.)

*Range.* Central and eastern Yukon, from Donjek River and upper Alsek River (Champagne Landing), east to McConnell River, Ross River (Canol Road, Mile 132, Lapie River\* a little below junction of Ross and Pelly Rivers, Ross Mountains), and southern part of Mackenzie Mountains (Ida Lake\*, Yukon, altitude about 4,000 feet, about 60 miles west of Glacier Lake, N.W.T.), and north to Richardson Mountains\* (collected by Knud H. Lang, July 1, 1929) about 25 miles southwest of Aklavik, Mackenzie district, Northwest Territories. One of the smallest of the northern grizzly bears. (N.W.T., Y.T.)

**\*Ursus tahl**tanicus Merriam. TAHLTAN GRIZZLY. *Ours gris des Tahltans*.

1914. *Ursus tahltanicus Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 181 (Aug. 13, 1914).*

*Type Locality.* Klappan Creek (third south fork of Stikine River), British Columbia, Canada. (Type: U.S.N.M., No. 179928.)

*Range.* Middle and upper Stikine-Skeena region, three specimens in N.M.C. from Omineca district\*, headwaters of Skeena River; limits of range unknown. (B.C.)

*arizonae* group

**Ursus chelan** Merriam. CHELAN GRIZZLY. *Ours gris du Chelan*.

1916. *Ursus chelan* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 136 (Sept. 6, 1916).

*Type Locality.* Township 30 N., range 16 E., Willamette meridian, Wenatche National Forest, east slope of Cascade Mountains, northern Chelan county, Washington. (Type: U.S.N.M., No. 205185.)

*Range.* Cascade and Cassiar Mountains from northern Washington to upper Stikine River and Dease Lake, British Columbia. (B.C.)

**Ursus orib**asus Merriam. LIARD RIVER GRIZZLY. *Ours gris de la rivière Laird*.

1918. *Ursus oribasus Merriam, North Amer. Fauna, No. 41, p. 56 (Feb. 9, 1918).*

*Type Locality.* Upper Liard River, Yukon, Canada, near British Columbia boundary. (Type: U.S.N.M., No. 225991.)

*Range.* Apparently known only from the type locality. Presumably occurs also in extreme northeastern British Columbia. (Y.T.)

**Ursus perv**agor Merriam. LILLOOET GRIZZLY. *Ours gris du Lillooet*.

1914. *Ursus pervagor Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 186 (Aug. 13, 1914).*

*Type Locality.* Pemberton Lake (now Lillooet Lake), in edge of humid coast strip, British Columbia, Canada. (Type: U.S.N.M., No. 187887.)

*Range.* Interior of southwestern British Columbia; known only from Lillooet Lake and Bridge River. (B.C.)

**\*Ursus pul**chellus **pul**chellus Merriam. UPPER YUKON GRIZZLY. *Ours gris du Haut-Yukon*.

1918. *Ursus pulchellus **pul**chellus Merriam, North Amer. Fauna, No. 41, p. 55 (Feb. 9, 1918).*

*Type Locality.* Ross River, Yukon, Canada. (Type: U.S.N.M., No. 221599.)

*Range.* Central and southern Yukon, from Donjek River and upper Alsek River (Champagne Landing) east to McConnell River, Ross River (Canol Road, Mile 132, Lapie River\*, a little below junction of Ross and Pelly Rivers), and Ross Mountains. (N.W.T., Y.T.)

<sup>1</sup>Named in honour of Peter Simon Pallas (1741-1811), zoologist noted for his investigations in Russia and Siberia. He was the original describer of a number of species of North American mammals and birds, and his name is familiar in connection with Pallas' murre, Pallas' cormorant, etc.



**Ursus pulchellus ereunetes** Merriam. KOOTENAY GRIZZLY. *Ours gris du Kootenay*.

1918. *Ursus pulchellus ereunetes* Merriam, North Amer. Fauna, No. 41, p. 56 (Feb. 9, 1918).

*Type Locality.* Beaverfoot Range, Kootenay district, British Columbia, Canada. (Type: U.S.N.M., No. 222323.)

*Range.* Apparently known only from the type locality. (B.C.)

*hylodromus* group

\***Ursus hylodromus** Elliot. FOREST GRIZZLY. *Ours gris des bois*.

1903. *Ursus hylodromus* Elliot, Field Columb. Mus., publ. 87, zool. ser., vol. 3, p. 257 (Dec. 1903).

1916. *Ursus selkirki* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 150 (Sept. 6, 1916). Selkirk Mountains, Upper Columbia River, British Columbia, Canada.

*Type Locality.* Rocky mountains of western Alberta, Canada, precise locality unknown. (Type: Chicago Mus. Nat. Hist., No. 19065.)

*Range.* Rocky Mountain region of western Alberta (Moose River\*), and eastern British Columbia, including Selkirk Range. (Alta., B.C.)

\***Ursus andersoni** Merriam. ANDERSON'S GRIZZLY. *Ours gris d'Anderson*.<sup>1</sup>

1918. *Ursus andersoni* Merriam, North Amer. Fauna, No. 41, p. 83 (Feb. 9, 1918).

*Type Locality.* East branch of Dease River, near Great Bear Lake, Mackenzie district, Northwest Territories, Canada. (Type: A.M.N.H., No. 34402, plastotype in N.M.C., No. 17095.)

*Range.* Not known to occur immediately on the Arctic coast, but ranges on the Barren Grounds along the northern edge of the Hudsonian zone from Eskimo Lakes\*, east and southeast to east end of Great Bear Lake (Dease River\*, east of type skull in N.M.C.), Aylmer Lake\* (northeast of Great Slave Lake), and probably from upper waters of Back, Dubawnt, Kazan, and Thelon Rivers on the borders of Mackenzie and Keewatin district (one specimen in R.O.M.Z., Toronto, examined; killed by Eskimos from Baker Lake). Several hunters' skins brought out from east side of Great Bear Lake have been examined, but the external characters were too imperfectly known at the time to refer them with certainty to this species. (N.W.T.)

**Ursus kluane kluane** Merriam. KLUANE GRIZZLY. *Ours gris du Kluane*.

1916. *Ursus kluane* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 141 (Sept. 6, 1916).

*Type Locality.* McConnell River, Yukon, Canada. (Type: U.S.N.M., No. 204188.)

*Range.* Southwest corner of Yukon east of the St. Elias Range, extending northwesterly in Alaska to Mount McKinley region (head of Toklat), easterly in Yukon to McConnell River (north-northeast of Teslin Lake), and probably south into northwest corner of British Columbia. (Y.T.)

**Ursus kluane impiger** Merriam. COLUMBIA VALLEY GRIZZLY. *Ours gris de la vallée Colombie*.

1918. *Ursus kluane impiger* Merriam, North Amer. Fauna, No. 41, p. 81 (Feb. 9, 1918).

*Type Locality.* Columbia Valley, British Columbia, Canada. (Type: U.S.N.M., No. 210708.)

*Range.* Western Montana (near Fort Blackfoot), western Alberta (Morley, Jasper), and southeastern British Columbia (Brisco, Columbia Valley). (Alta., B.C.)

<sup>1</sup>Named for R. M. Anderson, National Museum of Canada, in recognition of field work on barren ground bears, of which 24 specimens representing 4 species were collected by Arctic expeditions of 1908-12 (A.M.N.H.) and 1913-16 (N.M.C.) and were examined by Dr. Merriam.



\***Ursus pellyensis** Merriam. PELLY GRIZZLY. *Ours gris des montagnes Pelly.*

1918. *Ursus pellyensis* Merriam, North Amer. Fauna, No. 41, p. 82 (Feb. 9, 1918).

*Type Locality.* Ketzia Divide, Pelly Mountains, Yukon, Canada. (Type: U.S.N.M., No. 215477.)

*Range.* Pelly and Ross Mountains, northwest to Dawson region\*, Yukon. (Y.T.)

*stikeenensis* group

\***Ursus stikeenensis** Merriam. STIKINE GRIZZLY. *Ours gris de la rivière Stikine.*

1914. *Ursus stikeenensis* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 178 (Aug. 13, 1914).

*Type Locality.* Tatlatui Lake, near head of Skeena River, northern British Columbia, Canada. (Type: U.S.N.M., No. 187891.)

*Range.* Omineca district\* near headwaters of Skeena River, head of Finlay River, and Dease Lake region, northern British Columbia, and northerly into Yukon; limits of range unknown. (B.C., Y.T.)

\***Ursus crassodon** Merriam. BIG-TOOTHED GRIZZLY. *Ours gris à grandes dents.*

1918. *Ursus crassodon* Merriam, North Amer. Fauna, No. 41, p. 90 (Feb. 9, 1918).

*Type Locality.* Klappan Creek (third south fork, Stikine River), British Columbia, Canada. (Type: U.S.N.M., No. 171049.)

*Range.* Omineca district\* near headwaters of Skeena River, head of Teslin Lake\*, and Tatlatui River in northern British Columbia; Glenlyon Mountains, Quiet Lake at head of Big Salmon River, White River, and Wolf Lake\* northeast of Teslin Lake in Yukon; and Canol Road, Mile 124 E\* (Rand, 1944) on eastern slope of Mackenzie Mountains, in Mackenzie district, Northwest Territories. (B.C., N.W.T., Y.T.)

\***Ursus crassus** Merriam. THICKSET GRIZZLY. *Ours gris épais.*

1918. *Ursus crassus* Merriam, North Amer. Fauna, No. 41, p. 90 (Feb. 9, 1918).

*Type Locality.* Upper Macmillan River, Yukon, Canada. (Type: U.S.N.M., No. 225473.)

*Range.* Eastern Yukon (upper Macmillan River) to northern Mackenzie district. Merriam (1918, 91) provisionally refers to *crassus* three specimens from east of the Mackenzie, one from Anderson River (U.S.N.M.) and two from Horton River and Langton Bay (Anderson collection in A.M.N.H., with two casts of skulls in N.M.C.\*), and the N.M.C. has two additional specimens (one skin and two skulls) from south side of Coronation Gulf\*, which are referable to the same species. (N.W.T., Y.T.)

*alascensis* group

\***Ursus latifrons** Merriam. BROAD-FRONTED GRIZZLY. *Ours gris à large front.*

1914. *Ursus phaeonyx latifrons* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 183 (Aug. 13, 1914).

1918. *Ursus latifrons* Merriam, North Amer. Fauna, No. 41, p. 97 (Feb. 9, 1918).

*Type Locality.* Jasper House, Alberta, Canada. (Type: U.S.N.M., No. 75612.)

*Range.* Rocky Mountains of western Alberta and eastern British Columbia from Banff National Park\* and Jasper House northwesterly to region between headwaters of Parsnip River and Great Bend of Fraser River and thence to extreme headwaters of Stikine River; limits of range unknown. (Alta., B.C.)



*richardsoni* group

‡\**Ursus richardsoni* Swainson. RICHARDSON'S BARREN GROUND BEAR.<sup>1</sup> *Ours gris de Richardson.*

1838. *Ursus richardsoni* Swainson, Anim. in menageries, p. 54. Description based largely on Richardson's account of bear killed on shores of the Arctic sea August 1, 1821 (Fauna-Boreali Americana, 1829, pp. 21-24); also in Franklin's Narrative of Journey to Shores of the Polar Sea (1823, p. 373) described in some detail and locality fixed.
1885. *Ursus richardsoni* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 604 (1885).

*Type Locality.* Near first cascade, about 8 eight miles from mouth of Hood River, Arctic Sound, on west side of Bathurst Inlet, southeast of Coronation Gulf, Mackenzie district, Northwest Territories, Canada.

*Range.* Along Arctic coast from Kent Peninsula on coast and islands of Bathurst Inlet (Baillie's Cove\* at south end of Arctic Sound, a few miles from type locality); south side of Coronation Gulf (Kogaryuak River\*, Coppermine River\*); Dolphin and Union Strait (Bernard Harbour\*, Wise Point\*); Franklin Bay (Langton Bay\*), lower Anderson River, and west to Tuktoyaktok\* on northeast side of Mackenzie delta. No specimens recorded from Mackenzie delta or farther west, and no apparent intergradation with *internationalis* or *russelli*. Range nearly coincides with range of the smaller, shorter-snouted *Ursus macfarlani*, which is not known east of western part of Coronation Gulf, but extends farther west into Mackenzie delta. (N.W.T.)

†\**Ursus internationalis internationalis* Merriam.<sup>2</sup> ALASKA BOUNDARY GRIZZLY. *Ours gris de la frontière d'Alaska.*

1914. *Ursus internationalis* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 177 (Aug. 13, 1914).
1945. *Ursus internationalis internationalis* Anderson, Can. Field-Nat., vol. 59, No. 1, p. 8 (Aug. 1945).

*Type Locality.* Alaska-Yukon boundary, longitude 141 degrees west, about 50 miles south of the Arctic coast of Beaufort Sea. (Type: N.M.C., No. 1763, male adult, skin and skull.)

*Range.* Region near the Arctic coast along the Alaska-Yukon International Boundary (141st meridian\*), east to western side of Mackenzie delta in Northwest Territories (Red Mountain, Richardson Mountains, taken by A. C. Twomey in 1942, loaned by Carnegie Museum, referred to *internationalis* but resembles *russelli* in width of zygomata and in dished palate, and with last upper molar somewhat intermediate in form); and one from Richards Island\*, Mackenzie delta, taken by J. A. Parsons in 1941, showing some characters of *internationalis*, but closer to *russelli*. Western and southern limits of range unknown, but undoubtedly occurs in northeastern Alaska. (N.W.T., Y.T.)

\**Ursus internationalis russelli* Merriam.<sup>3</sup> MACKENZIE DELTA GRIZZLY. *Ours du delta Mackenzie.*

1914. *Ursus russelli* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 178 (Aug. 13, 1914).
1945. *Ursus internationalis russelli* Anderson, in Mammals of the Mackenzie Delta, by Porsild, A. E., Can. Field-Nat., vol. 59, No. 1, pp. 4-22 (comments on grizzly bears by Anderson, pp. 8-10) (Aug. 16, 1945).

*Type Locality.* West branch of Mackenzie River delta (Aklavik Branch) south of the northern limit of spruce, a little below Black Mountain, Richardson Mountains, Mackenzie district, Northwest Territories, Canada. (Type: Mus. Nat. Hist., Univ. of Iowa, No. 21301, male adult, skull and mounted skin. Cast (plastotype) of skull in N.M.C., No. 16134.)

<sup>1</sup>Named in honour of Dr. (Sir John) Richardson (1787-1865), Arctic explorer, physician, and naturalist with the Franklin expeditions of 1819-22 and 1825-27, and commander of the Franklin Search Expedition of 1848-49, whose extensive collections and publications provided the first authentic knowledge of many Canadian mammal and bird species. His name is connected with the Richardson vole, lemming, ermine, red squirrel, ground squirrel, shrew, falcon, grouse, owl, pewee, etc.

<sup>2</sup>The type specimen was collected July 3, 1912, by H. F. Lambert, well known explorer, mountaineer, and big game hunter, of Ottawa, while on the Alaska-Yukon International Boundary Survey.

<sup>3</sup>Named in honour of Frank Russell (1868-1903), zoologist and ethnologist, author of Explorations in the Far North, being a report of an expedition under the auspices of the University of Iowa during the years 1892, 1893, and 1894, published by the University, Iowa City, pp. 138-139, 242-7 1902. The Pima Indians, U.S. Bur. Amer. Ethnol., Ann. Rept. 1904.



*Range.* Outer part of Mackenzie delta region as far east as Richards Island\* (1941) where it shows some of the characters of *internationalis*, and west side of the delta where a skull fairly typical of *russelli* was obtained in the foothills of Richardson Mountains\* by A. E. Porsild in 1931. Another from the Carnegie Museum, Pittsburgh, taken by A. C. Twomey in the same area in 1942, has been examined and referred to *internationalis*, although showing some characters resembling the type of *russelli*. The two forms are not strongly differentiated and as *internationalis* has priority of one page in the original description of the two forms, *russelli* is considered as a subspecies. (N.W.T.)

*innuitus* group

\**Ursus cressonus* Merriam. CHITINA BEAR. *Ours de la Chitina*.

1916. *Ursus cressonus* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 137 (Sept. 6, 1916).

*Type Locality.* Lakina River, south slope of Wrangell Range, Alaska.

*Range.* Chitina River Valley and adjacent slopes of Skolai and Wrangell Mountains, westerly doubtless through Chugach Mountains to the west side of Cook Inlet; occurs as far south as the Iliamna region, east to southwestern Yukon (one large adult male skull taken in Dawson Range\* 50 miles northwest of Carmacks). (Y.T.)

*dalli* group

*Ursus hoots* Merriam.<sup>1</sup> STIKINE BROWN BEAR. *Ours brun de la rivière Stikine*.

1916. *Ursus hoots* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 140 (Sept. 6, 1916).

*Type Locality.* Clearwater Creek, a north branch of Stikine River, British Columbia, Canada. (Type: U.S.N.M., No. 206136.)

*Range.* Apparently known only from Stikine River and its northern branches; three from Clearwater Creek, and one from low down Stikine River. (B.C.)

*inopinatus* group

\**Ursus inopinatus* (Merriam). PATRIARCHAL BEAR. MACFARLANE YELLOW BEAR. *Ours patriarcal*.

1918. *Vetularctos inopinatus* Merriam, North Amer. Fauna, No. 41, p. 132 (Feb. 9, 1918).

1924. *Ursus inopinatus* Miller, List of North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 106 (Dec. 31, 1924).

*Type Locality.* Rendezvous Lake (about 69 degrees north, 126 degrees west, near northern limit of trees between the middle parts of Anderson River and Horton River), northeast of old Fort Anderson, Mackenzie district, Northwest Territories, Canada. (Type: U.S.N.M., No. 7149/8706. Cast of skull in N.M.C., No. 17100. Plastotype in N.M.C., No. 17100i.)

*Range.* Southern edge of Barren Grounds from Anderson River to region northeast of Great Slave Lake. Described from a single specimen (skin and skull young adult female) collected by Roderick Ross MacFarlane near Rendezvous Lake, June 24, 1864. The N.M.C. has a skull of similar age taken on Barren Grounds northeast of Great Slave Lake\*, in summer of 1929, showing almost identical characters. Hunters' skins examined from region south of Liverpool Bay and Langton Bay have been provisionally referred to this species. (N.W.T.)

<sup>1</sup>"Hoots", the native Indian name for the big brown and grizzly bears of the coast region.—Merriam.



Genus *Thalarctos* Gray.<sup>1</sup> Polar Bears

1825. *Thalarctos maritimus* Gray, Ann. of Philos., n.s., vol. 10, p. 62. Type, *Thalarctos polaris* Gray=*Ursus maritimus* Phipps.

\**Thalarctos maritimus maritimus* (Phipps). EASTERN ARCTIC POLAR BEAR. *Ours polaire arctique est.*

1774. *Ursus maritimus* Phipps, Voyage toward the North Pole, p. 185.  
 1862. *Thalarctos maritimus* Gray, Catal. Bones Mamm. Brit. Mus., p. 105.  
 1908. *Thalassarctos jenaensis* Knottnerus-Meyer, Sitzungsber. Gesellsch. naturforsch. Freunde, Berlin, p. 184 (July 1908). Jena Island, Spitsbergen. (Placed in synonymy by Miller, 1924, p. 107.)  
 1908. *Th[alassarctos] spitzbergensis* Knottnerus-Meyer, *ibid.*, p. 184 (July 1908). Seven Islands, Spitsbergen. (Placed in synonymy by Miller, 1924, p. 107.)  
 1908. *Thalassarctos eogroenlandicus* Knottnerus-Meyer, *ibid.*, p. 182 (July 1908). Pack ice off coast of eastern Greenland. (Three other forms, listed above, have been described from region between Spitsbergen and Greenland and careful study of the original description and plates do not show any characters not covered in normal individual variation in the species.)  
 1908. (*Thalassarctos maritimus*) var. *ungavensis* Knottnerus-Meyer, *ibid.*, p. 181 (July 1908). Ungava Bay, Canada. (Described from one female with male cub in Dresden Museum, taken by Bernhard Hantzsch near Killinek, Ungava Bay. Nine specimens in N.M.C. from Hudson Strait\*, Hudson Bay\*, and James Bay\*, which geographically might be expected to belong to this form, do not show enough uniform characters to differentiate them from *T. m. maritimus*.)

*Type Locality.* Spitsbergen (Svalbard).

*Range.* From Greenland, Ellesmere Island, Devon Island, Baffin Island, and other islands of the eastern Canadian Arctic Archipelago, as far west as Victoria Strait; south to Hudson Bay and James Bay at least to Twin Islands. Polar bears from eastern Labrador coast and Newfoundland, and casually in Gulf of St. Lawrence, may be referable to this form (*See under T. labradorensis*).

Specimens in N.M.C.: Smith Sound\* 1; Ellesmere Island, Glacier Strait\* 1; Devon Island, Cape Sparbo\* 1; Baffin Island, Cape Weston\* 1, Padle\* 1; Resolution Island\*, Hudson Strait, Cape Wolstenholme\* 1; west side of Hudson Bay, Chesterfield Inlet\* 1; Churchill, Manitoba\* 3; James Bay, Bear Island\* 1, South Twin Island\* 2; several others from eastern Arctic without exact locality. (Man., N.W.T., Ont., P.Q.)

*Thalarctos labradorensis* (Knottnerus-Meyer). LABRADOR POLAR BEAR. *Ours polaire du Labrador.*

1908. *Th[alassarctos] labradorensis* Knottnerus-Meyer, Sitzungsber. Gesellsch. naturforsch. Freunde, Berlin, p. 183 (July 1908).  
 1912. *Thalarctos labradorensis* Miller, North Amer. Land Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 77 (Dec. 31, 1912).

*Type Locality.* Okak, Labrador.

*Range.* According to Knottnerus-Meyer (1908, p. 183), following the Labrador current from the southern extremity of Greenland, along Labrador coast to Newfoundland. Evidence is insufficient for either acceptance or rejection of this form, but it is admitted to this list pending further investigations on comparable material. (P.Q., Labr., Nfld.)

<sup>1</sup>Revised by Theodor Knottnerus-Meyer, Ueber den Eisbären and seine geographischen Formen, Sitzungsberichte Gesellschaft naturforschender Freunde zu Berlin, Jahrgang 1908, pp. 170-187, Pls. x-xi (July 1908).



## Family CANIDAE. Foxes and Wolves

## Subfamily Caninae

Genus *Vulpes* Oken. Foxes

1816. *Vulpes* Oken, Lehrb. der Naturgesch., pt. 3, vol. 2, p. 1033. Type, *Canis vulpes* Linnaeus.

*fulva* group.<sup>1</sup> Red Foxes

\**Vulpes fulva fulva* (Desmarest). EASTERN RED FOX. *Renard roux*.

1820. *Canis fulvus* Desmarest, Mammalogie, vol. 1, p. 203.

1842. *Vulpes fulvus* DeKay, Zool. of New York, Mamm., p. 44.

1836. *Vulpes fulva fulva* Bailey, Nature Mag., vol. 28, No. 5, pp. 272, 317 (Nov. 1936).

Type Locality. Virginia.

Range. United States east of the Great Lakes, from northern Alabama, Georgia, and Carolinas north to southern Quebec\* and southern Ontario\*.

The general spread of the fur-farming industry has resulted in foxes of different races being mixed in breeding experiments, with frequent "escapes" from captivity, as well as releases of captive stock for purposes of sport, and determining subspecific identity of individuals from some areas is a questionable matter. (Ont., P.Q.)

\**Vulpes fulva abietorum* Merriam. BRITISH COLUMBIA RED FOX. *Renard roux de la Colombie-Britannique*.

1900. *Vulpes alascensis abietorum* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 669 (Dec. 28, 1900).

1936. *Vulpes fulva abietorum* Bailey, Nature Mag., vol. 28, No. 5, p. 317 (Nov. 1936).

Type Locality. Stuart Lake, British Columbia. (Type: U.S.N.M., No. 71197.)

Range. Northern interior of British Columbia and probably southeastern Alaska, southeastern Yukon and southwestern part of Mackenzie district, Northwest Territories as far east as Slave River, and northern Alberta as far south as McMurray, Athabaska River. (Alta., B.C., N.W.T., Y.T.)

\**Vulpes fulva alascensis* Merriam. ALASKA RED FOX. *Renard roux d'Alaska*.

1900. *Vulpes alascensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 668 (Dec. 28, 1900).

1936. *Vulpes fulva alascensis* Bailey, Nature Mag., No. 28, No. 5, p. 317 (Nov. 1936).

Type Locality. Andreafski, near mouth of Yukon River, Alaska. (Type: U.S.N.M., No. 21420.)

Range. Through most of northern\* and central Alaska, northern and central parts of Yukon and Mackenzie district of Northwest Territories as far south as Great Slave Lake and east to Coronation Gulf\* and Bathurst Inlet. (N.W.T., Y.T.)

*Vulpes fulva bangsi* Merriam. LABRADOR RED FOX. *Renard roux du Labrador*.<sup>2</sup>

1900. *Vulpes rubricosa bangsi* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 667 (Dec. 28, 1900).

1936. *Vulpes fulva bangsi* Bailey, Nature Mag., No. 28, No. 5, p. 317 (Nov. 1936).

Type Locality. L'Anse au Loup, Strait of Belle Isle, Labrador. (Type: Bangs coll., M.C.Z., No. 8880.)

Range. Northern Quebec and coast of Labrador from northern end of James Bay east to Strait of Belle Isle and north to Hudson Strait; southwestern limits of range imperfectly known. (P.Q., Labr.)

<sup>1</sup>Revised by Merriam, Proc. Wash. Acad. Sci., vol. 2, pp. 661-676 (Dec. 28, 1900); Bailey, Nature Mag., vol. 28, No. 5, pp. 269-272, 317 (Nov. 1936).

<sup>2</sup>Named for Outram Bangs (1863-1932), well-known American naturalist, who built up a private collection of about 10,000 mammals, described many new Canadian forms; later curator of mammals in Mus. Comp. Zool. at Harvard College, Cambridge, Mass., and still later curator of birds in the same institution.



***Vulpes fulva cascadensis* Merriam.** CASCADE RED FOX. *Renard roux des Cascades.*

1900. *Vulpes cascadensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 665 (Dec. 28, 1900).  
 1936. *Vulpes fulva cascadensis* Bailey, Nature Mag., No. 28, No. 5, p. 317 (Nov. 1936).

*Type Locality.* Trout Lake, south base of Mount Adams, Cascade Mountains, Skamania county, Washington. (Type: U.S.N.M., No. 92767.)

*Range.* "Inhabits the Cascade Range from southern British Columbia to Mount Lassen in [northern] California, mainly among rocks high up" (Bailey, 1936). (B.C.)

***Vulpes fulva deletrix* Bangs.** NEWFOUNDLAND RED FOX. *Renard roux de Terre-Neuve.*

1898. *Vulpes deletrix* Bangs, Proc. Biol. Soc. Wash., vol. 12, p. 36 (March 24, 1898).  
 1936. *Vulpes fulva deletrix* Bailey, Nature Mag., No. 28, No. 5, p. 317 (Nov. 1936).

*Type Locality.* Bay St. George, Newfoundland.

*Range.* Considered to be restricted to island of Newfoundland. (Nfld.)

**\**Vulpes fulva regalis* Merriam.** NORTHERN PLAINS RED FOX. YELLOW-RED FOX. *Renard roux des prairies.*

1900. *Vulpes regalis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 672 (Dec. 28, 1900).  
 1926. *Vulpes fulva regalis* Bailey, North Amer. Fauna, No. 49, pp. 160-3. (Nov. 1936).

*Type Locality.* Elk River, Sherburn county, Minnesota. (Type: U.S.N.M., No. 31697/43358.)

*Range.* From west side of Great Lakes and southwest side of Hudson Bay throughout northwestern Ontario, central and southern Manitoba\* and Saskatchewan\* and southeastern Alberta, south to Kansas and Missouri. (Alta., Man., Ont., Sask.)

**\**Vulpes fulva rubricosa* Bangs.** NORTHEASTERN RED FOX. *Renard roux du nord-est.*

1897. *Vulpes pennsylvanica vafra* Bangs, Proc. Biol. Soc. Wash., vol. 11, p. 53 (March 16, 1897). (Not *Vulpes vafra* Leidy, 1869.)  
 1898. *Vulpes pennsylvanica rubricosa* Bangs, Science, n.s., vol. 7, p. 272 (Feb. 25, 1898).  
 1924. *Vulpes rubricosa rubricosa* Miller, List North Amer. Recent Mamm., 1923, p. 144 (March 18, 1924).  
 1936. *Vulpes fulva rubricosa* Bailey, Nature Mag., No. 28, No. 5, 1936, p. 317.

*Type Locality.* Digby, Nova Scotia.

*Range.* Nova Scotia including Cape Breton Island, New Brunswick, Prince Edward Island, central and western Quebec to southern end of James Bay, and northern Ontario west to Lake Superior. (N.B., N.S., Ont., P.E.I., P.Q.)

**\**Vulpes velox hebes* Merriam.** PRAIRIE KIT FOX, PRAIRIE FOX, ALBERTA KIT FOX. SWIFT FOX. *Renard vite. Renard vite d'Alberta.*

1902. *Vulpes velox hebes* Merriam, Proc. Biol. Soc. Wash., vol. 15, p. 73 (March 22, 1902).

*Type Locality.* Calgary, Alberta, Canada. (Type: U.S.N.M., No. 108255.)

*Range.* Anthony (1928) states that this race is "Found from southeastern British Columbia and southwestern Saskatchewan south to Wyoming; east into North Dakota." The kit foxes are almost extinct in Canada, and very few Canadian specimens are available, but *V. v. hebes* is said to be "larger, paler and greyer" than the typical form. (Alta., B.C., Man., Sask.)

**Genus *Urocyon* Baird.** Grey Foxes

1857. *Urocyon* Baird, Mamm. North Amer., p. 121. Type, *Canis virginianus* Erxleben (= *Canis cinereoargenteus* Schreber).

***Urocyon cinereoargenteus cinereoargenteus* (Schreber).** EASTERN GREY FOX. *Renard gris de l'Est.*

1775. *Canis cinereoargenteus* Schreber, Säugthiere, Pl. 92.  
 1885. *Urocyon virginianus virginianus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 610 (1885). (In part.)  
 1894. *Urocyon cinereoargenteus* Rhoads, Amer. Nat., vol. 28, p. 524 (June 1894).

*Type Locality.* Eastern North America.



**Range.** "Found in eastern United States from Virginia north into New England and west to the Great Lakes region, south to meet the range of *floridanus*; limits of range unknown" (Anthony, 1928). Apparently common in parts of southern Ontario in early times, as shown by skull fragments from an Indian village site in Oxford county, Ontario (Wintemberg, 1921). Seton (1925) quotes record of specimen recently taken at Point Pelee on Lake Erie, and there are reports of grey foxes seen and taken in the same area as late as 1942. Hamilton (1943, *The Mammals of Eastern United States*, vol. 2, p. 174) maps the range of *U. c. cinereoargentatus* as extending northward to south shore of Lake Erie in northwestern Pennsylvania and northern Ohio, and southeastern Michigan up to western end of Lake Erie, St. Clair River, and southwest side of Lake Huron, and presumably the records from extreme southern Ontario refer to this form. (Ont.)

***Urocyon cinereoargenteus borealis* Merriam.** NORTHERN GREY FOX. NEW ENGLAND GREY FOX. *Renard gris du Nord. Renard gris de la Nouvelle-Angleterre.*

1903. *Urocyon cinereoargenteus borealis* Merriam, Proc. Biol. Soc. Wash., vol. 16, p. 74 (May 29, 1903).

**Type Locality.** Marlboro, 7 miles from Monadnock, Cheshire county, New Hampshire. (Type: U.S.N.M., No. 119725.)

**Range.** Limits of range not definitely recorded, but this race approaches the Quebec border in Vermont, New Hampshire, and northern New York, and there is at least one well-authenticated sight record by K. Racey in Compton county, Quebec, near the New Hampshire border. Bones of the grey fox have been found in some numbers in pre-historic Indian village sites in southern Ontario (Oxford county, Wintemberg, N.M.C., Bull. No. 51, p. 6), but the grey fox has not been authentically recorded from Ontario in modern times until the R.O.M.Z., Toronto, obtained one trapped near Glengarry county, in 1942, and a second specimen captured 6 miles east of Kaladar in February 1944, both referred to *U. c. borealis* (Downing, S. C., MSS., 1945). (Ont., P.Q.)

***Urocyon cinereoargenteus ocythous* Bangs.** WISCONSIN GREY FOX. *Renard gris du Wisconsin.*

1899. *Urocyon cinereoargenteus ocythous* Bangs, Proc. New England Zool. Club, vol. 1, p. 43 (June 5, 1899).

**Type Locality.** Platteville, Grant county, Wisconsin. (Type: M.C.Z., No. B4290.)

**Range.** Upper Mississippi Valley from western Wisconsin, eastern and southern Minnesota, and southern South Dakota; north to extreme southwestern corner of western Ontario; southern limits of range not determined. The only Canadian record is one specimen taken at Wild Potato Lake, Rainy River district, October 2, 1944 (R.O.M.Z., No. 16311, S. C. Downing, MSS., 1945). The grey fox is known to be extending its range northward in both east and west, coincident with the continuing northward spread of the cottontail rabbit (*Sylvilagus* spp.), and should be looked for in southern Manitoba. (Ont.)

#### Genus *Alopex* Kaup. Arctic Foxes

1829. *Alopex* Kaup, Skizzirte Entw.-Gesch. u. natürl. Syst. Europ. Thierw., vol. 1, p. 85. Type, *Canis lagopus* Linnaeus.

**\**Alopex lagopus groenlandicus* (Bechstein).** GREENLAND ARCTIC FOX. *Renard du Groenland.*

1799. *Canis groenlandicus* Bechstein, Pennant's allgem. Uebersicht vierfuss. Thiere, vol. 1, p. 270.

1898. ? *Canis lagopus spitzbergensis* Barrett-Hamilton and Bonhote, Ann. and Mag. Nat. Hist., ser. 7, vol. 1, p. 287 (April 1898). Spitzbergen.

1924. *Alopex groenlandicus* Miller, List North Amer. Recent Mamm., 1923, p. 149 (March 18, 1924).

**Type Locality.** Greenland.



*Range.* Greenland and parts of Ellesmere Island, Northwest Territories. Specimens in the "blue fox" phase are found in much greater proportions in Greenland than in the Canadian Arctic, but the skull characters do not show differentiations that appear of more than subspecific importance. (Greenland, N.W.T.)

**\*Alopex lagopus innuitus** (Merriam). CONTINENTAL ARCTIC FOX. *Renard arctique*.

1902. *Vulpes lagopus innuitus* Merriam, Proc. Biol. Soc. Wash., vol. 15, p. 170 (August 6, 1902).  
 1911. *V[ulpes] lagopus kenaiensis* Brass, Aus dem Reiche der Pelze, 466 (not *Vulpes kenaiensis* Merriam). Mainland of Alaska.  
 1912. *Alopex lagopus innuitus* Miller, North Amer. Land Mamm. 1911, p. 82 (Dec. 31, 1912).

*Type Locality.* Karogar River, Point Barrow, Alaska. (Type: U.S.N.M., No. 107626.)

*Range.* Arctic coast and tundra region from western and northern Alaska\*, northern Yukon\*, Mackenzie and Keewatin districts of Northwest Territories\* to west side of Hudson Bay and Baffin Island\*; the northern parts of Alberta, Saskatchewan, and Manitoba, and that part of northwestern Ontario bordering on Hudson Bay; found on most of the islands of Canadian Arctic and ranges far out on the sea ice in winter. (Alta., Man., N.W.T., Ont., Sask., Y.T.)

**\*Alopex lagopus ungava** (Merriam). UNGAVA ARCTIC FOX. *Renard arctique d'Ungava*.

1885. *Vulpes lagopus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 410 (1885). (In part.)  
 1902. *Vulpes lagopus ungava* Merriam, Proc. Biol. Soc. Wash., vol. 15, p. 170 (Aug. 6, 1902).  
 1912. *Alopex lagopus ungava* Miller, North Amer. Land Mamm., 1911, p. 82 (Dec. 31, 1912).

*Type Locality.* Fort Chimo, south of Ungava Bay, Quebec, Canada. (Type: U.S.N.M., No. 23195.)

*Range.* Ordinarily restricted to the treeless parts of Labrador (Voyseys Bay near Nain) and northern Ungava Peninsula (Cape Wolstenholme\*, Chimo\*, Cape Smith\*, Payne Bay\*), but some winters appears in considerable numbers as far south as north shore of the Gulf of St. Lawrence.

One white fox, assumed to belong to this form, was shot at Lingan Bay on the east coast of Cape Breton Island, Nova Scotia, April 10, 1923, after a winter notable for the severity of the weather and for the extent and thickness of the ice in the Gulf of St. Lawrence and adjoining waters, preceded by a notable migration of white foxes from the north to the north shore of the Gulf of St. Lawrence in the spring of 1922 (J. L. DeVany, Can. Field-Nat., vol. 37, No. 6, p. 118, Oct. 25, 1923). (N.S., P.Q., Labr.)

### Genus *Canis* Linnaeus

1758. *Canis* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 38. Type, *Canis familiaris* Linnaeus.

#### Subgenus *Thos* Oken.<sup>1</sup> Jackals and Coyotes

1816. *Thos* Oken, Lehrb. der Naturgesch., pt. 3, vol. 2, p. 1037. Type, *Thos vulgaris* Oken = *Canis aureus* Linnaeus. For use of this name in place of *Lyciscus* Hamilton-Smith, See Heller, Smith. Misc. Coll., vol. 36, No. 7, p. 1 (June 24, 1914).

**\*Canis latrans latrans** Say. NORTHERN COYOTE. PRAIRIE WOLF (Middle Western States). BRUSH WOLF (Prairie Provinces). *Loup des Prairies*.

1823. *Canis latrans* Say, Long's Exped. Rocky Mountains, vol. 1, p. 168.  
 1926. *Canis latrans latrans* Bailey, North Amer. Fauna, No. 49, p. 156 (Dec. 1926).

*Type Locality.* Engineer Cantonment, near present town of Blair, Washington county, Nebraska. (Not Council Bluffs, Pottawattomie county, Iowa.)

*Range.* Humid prairies and bordering woodlands of the Northern Mississippi Valley in Iowa and Minnesota, eastern Nebraska, South Dakota, and North

<sup>1</sup>Revised by Merriam, Proc. Biol. Soc., Wash., vol. 11, pp. 19-33 (Mar. 15, 1897).



Dakota, and northern edge of the Great Plains in Manitoba, Saskatchewan, and Alberta to the foothills of the Rocky Mountains in Alberta; east casually to Indiana. In Ontario known to have been common in western Rainy River district in 1890, but no specimens recorded from southern Ontario until 1919 (Thetford\*, Lambton county); more recently spreading eastward and northward, and specimens obtained in 1943 from Point Pelee\* (Essex county), near Lakefield\* (Peterborough county), and Dunrobin\* (25 miles west of Ottawa, in Carleton county). One specimen taken at Luskville\*, Gatineau county, P.Q., Oct. 29, 1944, and others reported in southwestern Quebec along north side of Ottawa River, but many of the recent Ontario and Quebec reports of wolves are confused with dogs and the much larger eastern timber wolf (*Canis lupus lycaon*). (Alta., Man., Ont., P.Q., Sask.)

\***Canis latrans incolatus** Hall. NORTHWESTERN COYOTE. *Coyote du nord-ouest*.

1934. *Canis latrans incolatus* Hall, Univ. Calif. Publ. Zool., vol. 40, No. 9, pp. 369-370 (Nov 5, 1934).

*Type Locality.* Isaacs Lake, 3,000 feet elevation, Bowron Lake region, British Columbia. (Type: M.V.Z., No. 43898.)

*Range.* From Anahim Lake and vicinity of Bowron Lake, British Columbia, northward at least as far as Wonder Lake, Mount McKinley district, Alaska; east to northern Alberta\*, north casually to central Yukon and in Mackenzie district to Mackenzie River delta. (Alta.\*, B.C.\*, N.W.T.\*, Y.T.\*)

\***Canis latrans lestes** Merriam. MOUNTAIN COYOTE. *Coyote des montagnes*.

1897. *Canis lestes* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 25 (March 15, 1897).

*Type Locality.* Toyabe Mountains, near Clovedale, Nye county, Nevada. (Type: U.S.N.M., No. 24452/32347.)

*Range.* Transition zone from the dry interior of southern British Columbia\*, Washington, and Oregon southward over the higher lands of the Great Basin, the Sierra Nevada, and the Rocky Mountains from western Alberta to the plateau of northern Arizona, and thence along the continental divide to the Mexican boundary. (Alta., B.C.)

\***Canis latrans nebracensis** Merriam. NEBRASKA COYOTE. *Coyote du Nebraska*.

1897. *Canis pallidus* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 24 (March 15, 1897). (Not of Rüppell, 1826.)

1898. *Canis nebracensis* Merriam, Science, n.s., vol. 8, p. 782 (Dec. 2, 1898). Substitute for *pallidus* Merriam.

1926. *Canis latrans nebracensis* Bailey, North Amer. Fauna, No. 49, p. 157.

*Type Locality.* Johnstown, Brown county, Nebraska. (Type: U.S.N.M., No. 77093.)

*Range.* Arid and semiarid plains from western Nebraska and eastern Colorado to Wyoming, Montana, and southern Alberta\* and Saskatchewan\* and a small part of southwestern Manitoba. (Alta., Man., Sask.)

#### Subgenus *Canis* Linnaeus.<sup>1</sup> Dogs and Wolves proper

\***Canis lupus arctos** Pocock. CANADIAN POLAR WOLF. *Loup polaire canadien*.

1935. *Canis lupus arctos* Pocock, Proc. Zool. Soc. London, 1935, pt. III, pp. 682-683 (Sept. 1935).

*Type Locality.* Melville Island, Northwest Territories, Canada. (Type: Br. Mus., Nat. Hist., No. 55.5.14.10.)

<sup>1</sup>Revised in part by Pocock, R.I., The Races of *Canis lupus*, Proc. Zool. Soc. London, 1935, Part III, pp. 647-686; Goldman, E. A., The Wolves of North America, Journ. Mamm., vol. 18, No. 1, pp. 37-45; Goldman, E. A., Three New Wolves from Arctic America, Proc., Biol. Soc. Wash., vol. 54, pp. 109-114 (Sept. 30, 1941); Anderson, R. M., Summary of the Large Wolves of Canada, with description of three new Arctic races, Journ. Mamm., vol. 24, No. 3, pp. 386-393, map 1, table 1 (August 17, 1943). See also Young, Stanley P., and Goldman, Edward A. (Senior Biologists, Section of Biological Surveys, Fish and Wildlife Service, Department of the Interior), The Wolves of North America: Part I, Their History, Life Habits, Economic Status, and Control, by Stanley P. Young; Part II, Classification of Wolves, by Edward A. Goldman; published by the American Wildlife Institute, Washington, D.C., 1944, pp. xx, 636, figs. 15, tables 7 (1944).



*Range.* Melville Island, Sverdrup Islands, and Ellesmere Island, and probably some of the neighbouring islands.

Described by R. I. Pocock on the basis of 1 adult male skull from Melville Island, and 1 old skull from Discovery Bay, on north coast of Ellesmere Island. The National Museum of Canada has 3 adult male skulls taken by the late Inspector A. H. Joy, R.C.M.P., in 1927, on west coast of Ellesmere Island (1 from Bear Peninsula\* on Norwegian Bay, and 2 from Eureka Sound\*, which separates Ellesmere Island from Axel Heiberg Island), and Goldman (1944, p. 431) lists 2 specimens from Ellesmere Island (1 skin without skull, 1 skull without skin) from the A.M.N.H. collection. (N.W.T.)

**Canis lupus beothucus** Allen and Barbour. NEWFOUNDLAND WOLF. *Loup de Terre-Neuve.*

1937. *Canis lupus beothucus* Glover M. Allen and Thomas Barbour, Journ. of Mamm., vol. 18, No. 2, May 1937, pp. 229-234 (May 14, 1937).

*Type Locality.* Newfoundland (about 1865). (Type: M.C.Z., No. 351.)

*Range.* Confined to Newfoundland. Now extinct. (Nfld.)

†\***Canis lupus bernardi** Anderson. BANKS ISLAND WOLF.<sup>1</sup> *Loup arctique de l'île Banks.*

1943. *Canis lupus bernardi* Anderson, Journ. Mamm. 24:3, p. 389 (Aug. 17, 1943).

1943. [*Canis lupus*] *banksianus* Anderson, *ibid.*, p. 390; synonym used inadvertently in table of cranial measurements.

*Type Locality.* Cape Kellett, southwestern part of Banks Island, district of Franklin, Northwest Territories, Canada, latitude about 72 degrees north, longitude 125 degrees west. (Type: N.M.C., No. 2796.)

*Range.* Known from Banks Island\*, but probably also occurs on north-western Victoria Island. (N.W.T.)

\***Canis lupus columbianus** Goldman. BRITISH COLUMBIA WOLF. *Loup de la Colombie-Britannique.*

1941. *Canis lupus columbianus* Goldman, Proc. Biol. Soc. Wash., vol. 54, pp. 110-112 (Sept. 30, 1941).

*Type Locality.* From Wistaria, north side of Ootsa Lake, Coast district, British Columbia. (Type: B.C. Prov. Mus. No. 3559.)

*Range.* Greater part of British Columbia, west of the Rocky Mountains and in the Stikine Mountains, passing into *fuscus* near the southwestern coast and into *ligoni* along the coast bordering the Alexander Archipelago of southwestern Alaska; into *pambasileus* in southwestern Yukon; grades into *occidentalis* in the Peace River region and northern part of Jasper Park\*, Alberta, and farther south into *irremotus*. (Alta., B.C., Y.T.)

**Canis lupus crassodon** Hall. VANVOUVER ISLAND WOLF. *Loup de l'île de Vancouver.*

1932. *Canis occidentalis crassodon* Hall, Univ. of Calif. Publ. in Zool., vol. 38, No. 12, pp. 420-421 (Nov. 8, 1932).

1937. *Canis lupus crassodon* Goldman, Journ. Mamm., vol. 18, No. 1, pp. 45 (Feb. 14, 1937).

*Type Locality.* Tahsis Canal, Nootka Sound, Vancouver Island, British Columbia. (Type: M.V.Z., No. 12456.)

*Range.* Vancouver Island, British Columbia. (B.C.)

\***Canis lupus fuscus** Richardson. PACIFIC BROWN WOLF. *Loup brun du Pacifique.*

1839. *Canis lupus* var. *fusca* Richardson, in Mammalia, Zoology of Captain Beechey's Voyage, London, p. 5. Description validated by further particulars in Richardson's Fauna Boreali-Americana, 1829, pp. 60-61.

1850. *Lupus gigas* Townsend, Journ. Acad. Nat. Sci. Phila., vol. 2, p. 75 (Nov. 1850). (In part.) Near Vancouver, Clark county, Washington.

1937. *Canis lupus fuscus* Allen and Barbour, Journ. Mamm., 18:2, p. 230 (May 14, 1937).

*Type Locality.* California and the banks of Columbia River.

<sup>1</sup>Named for Peter Bernard, collector of the type, and Jos. F. Bernard, of Prince Edward Island, pioneers in the western Arctic, both of whom collected valuable scientific material for the National Museum of Canada.



*Range.* Not known to exist at present in California, but is found casually in Oregon and Washington in the Cascade Mountains, west in places to Pacific coast; and on mainland coast of southwestern British Columbia at least as far north as Kimsquit\* at head of Dean Channel about latitude 54° north, longitude 128° 45' west. (B.C.)

\**Canis lupus hudsonicus* Goldman. KEEWATIN TUNDRA WOLF. *Loup du Keewatin.*

1941. *Canis lupus hudsonicus* Goldman, Proc. Biol. Soc. Wash., vol. 54, pp. 112-113 (Sept. 30, 1941).

*Type Locality.* From head of Schultz Lake, district of Keewatin (N.W.T.), Canada. (Type: U.S.N.M., No. 180281.)

*Range.* Northern Keewatin district of Northwest Territories, including the northwestern coast of Hudson Bay (Cape Fullerton), west to northeastern Mackenzie district (Back River 20 miles below Lake Beechey) and region east of Great Slave Lake; (twelve skulls in N.M.C. from Artillery Lake\* and four from Ptarmigan Lake\* between the Yellowknife Reserve and Thelon Game Sanctuary showing intergradation with *occidentalis*). (N.W.T.)

\**Canis lupus irremotus* Goldman. NORTHERN ROCKY MOUNTAIN WOLF. MONTANA GREY WOLF. *Loup des Rocheuses du nord.*

1937. *Canis lupus irremotus* Goldman, Journ. Mamm., vol. 18, No. 1, Feb. 14, 1937, pp. 41-42.

*Type Locality.* Red Lodge, Carbon county, southwestern Montana. (Type: U.S.N.M., No. 214869.)

*Range.* Northern Rocky Mountain region, and high adjoining plains from northwestern Wyoming north through western Montana and eastern Idaho to Waterton Lakes National Park\*, Alberta, and east to Lethbridge, Alberta. (Alta.)

\**Canis lupus knightii*, nomen nov.<sup>1</sup> SASKATCHEWAN TIMBER WOLF. *Loup gris de la Saskatchewan.*

1823. *Canis Lupus-Griseus* Sabine, Franklin's Narr. Journ. to Shores of Polar Sea. No. 5, Zool. Appendix, p. 655; plate opp. p. 312.

1829. *Canis Lupus-Griseus* Richardson, Fauna Boreali-Americana, pp. 66-67.

1912. *Canis occidentalis* Miller, Smiths. Misc. Coll., vol. 59, No. 15, p. 4 (June 8, 1912). Fort Simpson, Northwest Territories. (In part.)

1943. *Canis lupus griseus* Anderson, Journ. Mamm., vol. 24, No. 3, pp. 386, 390 (Aug. 17, 1943). A homonym, preoccupied by *Canis griseus* Boddaert, Elench. Anim., p. 97, 1794, a synonym of *Canis cinereo argenteus* Schreber, Säugthiere, p. 92, 1775, a species that is now placed in the genus *Urocyon* (American grey foxes; both wolves and foxes were included in the Linnaean genus *Canis* prior to 1816).

*Type Locality.* Cumberland House, Saskatchewan, about 35 miles northwest of The Pas, Manitoba, and about 15 miles west of the present Manitoba-Saskatchewan interprovincial boundary, latitude 54 degrees north, longitude 101° 40' west. (Type: Collected by Captain (later Sir John) Franklin, R.N., in January 1820; skin preserved and deposited in British Museum; plesiotype in N.M.C., No. 17098, adult male, skin and skull, taken in Prince Albert National Park, Sask., in 1941.)

*Range.* Forested regions of northern Manitoba and Saskatchewan; south formerly to the edge of the prairie region about Carlton, Saskatchewan; east into central and southeastern Manitoba (casually at Riding Mountain National Park), and presumably west into northeastern Alberta, intergrading with *occidentalis* in that region, and with *hudsonicus* along the northern boundary of Manitoba; presumably intergrading with *nubilus* in central Saskatchewan in

<sup>1</sup>Renaming of *Canis lupus griseus* Anderson, 1943. The new name is given in honour of Herbert Knight, Esq., for many years superintendent of Waterton Lakes National Park, and since 1939 superintendent of Prince Albert National Park, to whom the National Museum is indebted for numerous specimens from both of these parks, and particularly for supplying the museum with field measurements and other valuable data pertaining to sixteen good skulls and three skins of the present form, all of which have been useful in establishing the characters of this race in comparison with other races of large wolves.



former times. Specimens from the Manitoba and western Ontario interprovincial boundary region appear to show intergradation with *lycaon* at the present time. (Alta., Man., Sask.)

\****Canis lupus labradorius*** Goldman. LABRADOR WOLF. *Loup du Labrador*.

1937. *Canis lupus labradorius* Goldman, Journ. of Mamm., vol. 18, No. 1, Feb. 14, 1937, pp. 38-39.

*Type Locality.* From vicinity of Fort Chimo, Quebec, Canada. (Type: U.S.N.M., No. 23136.)

*Range.* "Northern Quebec; limits of range undetermined." Described from 5 skulls only, from the region of the type locality. One male skull in National Museum from George River\*, southeast of Ungava Bay. (P.Q.)

\****Canis lupus ligoni*** Goldman.<sup>1</sup> ALEXANDER ARCHIPELAGO WOLF. SOUTHEASTERN ALASKA WOLF. *Loup d'Alaska sud*.

1937. *Canis lupus ligoni* Goldman, Journ. of Mamm., vol. 18, No. 1, Feb. 14, 1937, pp. 39-40.

*Type Locality.* Head of Duncan Canal, Kupreanof Island, Alexander Archipelago, Alaska. (Type: U.S.N.M., No. 243323.)

*Range.* "Alexander Archipelago and doubtless adjacent mainland of southeastern Alaska." One black-pelaged specimen in National Museum of Canada (Mammals, No. 15) from Port Simpson, Chatham Sound, northwestern British Columbia, presented by H.R.H. the Princess Louise in 1883. (B.C.)

\****Canis lupus lycaon*** Schreber. EASTERN TIMBER WOLF. *Loup des bois de l'Est*.

1775. *Canis lycaon* Schreber, Säugthiere, Pl. 89.

1912. *Canis lycaon* Miller, Proc. Biol. Soc. Wash., vol. 25, p. 95 (May 4, 1912).

1937. *Canis lupus lycaon* Goldman, Journ. Mamm., 18:1, p. 45 (Feb. 14, 1937).

*Type Locality.* Eastern Canada.

*Range.* Generally distributed in thinly settled forested areas from eastern Quebec\* to western and northern Ontario (Fort William\* and Rainy Lake\*); intergrading with *C. l. knightii* near the Ontario-Manitoba interprovincial boundary; exterminated in Nova Scotia and in most parts of the northeastern United States. (Ont., P.Q.)

†***Canis lupus mackenzii*** Anderson. MACKENZIE TUNDRA WOLF. *Loup arctique du Mackenzie*.

1823. *Canis Lupus-Albus* Sabine, Franklin's Narr. Journ. to Shores of Polar Sea, No. 5, Zool. Appendix, p. 655; pl. opp. p. 312. (Not *Canis lupus albus* Kerr, 1792).

1908. *Canis occidentalis albus* Preble, North Amer. Fauna, No. 27, p. 213.

1924. *Canis tundrarum* Miller, List North Amer. Recent Mamm., 1923, p. 155. (In part.)

1935. *Canis lupus tundrarum* Pocock, Proc. Zool. Soc. London, 1935, pt. III, pp. 681-682. (In part.)

1943. *Canis lupus mackenzii* Anderson, Journ. Mamm., 24:3, pp. 388-389 (Aug. 17, 1943).

*Type Locality.* Imnaruit, west of Kater Point, Bathurst Inlet, district of Mackenzie, Northwest Territories, Canada, latitude 67° 44' 20" N., longitude 109° 04' 03" W. (Type: N.M.C., No. 2792.)

*Range.* Arctic coast and tundra region of Mackenzie district from Mackenzie delta east to southern Victoria Island and Queen Maud Sea, south to northern and eastern sides of Great Bear Lake, upper Coppermine and upper Back Rivers, intergrading with *occidentalis* in southern parts of its range and presumably with *hudsonicus* to the eastward. (N.W.T.)

<sup>1</sup>Named for J. Stokley Ligon, of Fish and Wildlife Service, Dept. of Interior, Washington, collector of the type specimen, and active in field work on Western North American mammals.



†\***Canis lupus manningi** Anderson.<sup>1</sup> BAFFIN ISLAND TUNDRA WOLF. *Loup arctique de l'île de Baffin*.

1943. *Canis lupus manningi* Anderson, Journ. Mamm., 24:3, pp. 392-393 (Aug. 17, 1943).

*Type Locality.* Hantzsch River, east side of Foxe Basin, west coast of Baffin Island, district of Franklin, Northwest Territories, Canada, latitude about 67° N., longitude 24° W. (Type: N.M.C., No. 17236.)

*Range.* In all parts of Baffin Island from Hudson Strait to Pond Inlet; probably also on Bylot Island. (N.W.T.)

\***Canis lupus nubilus** Say. GREAT PLAINS GREY WOLF. BUFFALO WOLF. LOBO. *Loup gris des prairies*.

1823. *Canis nubilus* Say, Long's Exped. Rocky Mts., vol. 1, p. 169.

1885. *Canis lupus griseo-albus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 610 (1885). (Part.)

1894. *Canis mexicanus nubilus* Rhoads, Amer. Nat., vol. 28, p. 524.

1931. *Canis lycaon nubilus* Bailey, North Amer. Fauna, No. 53, p. 308.

1935. *Canis lupus nubilus* Pocock, Proc. Zool. Soc., London, 1935, pt. III, p. 677.

*Type Locality.* Engineer Cantonment, near present town of Blair, Washington county, Nebraska.

*Range.* Formerly common in north-central part of Great Plains region from northern Texas to southern Alberta and Saskatchewan, and probably southwestern Manitoba; stated by Goldman (Journ. Mamm., 18:1, p. 41, 1937) to be probably extinct. The National Museum has one imperfect cranium picked up in an Indian midden in central Saskatchewan\* in 1943, and two specimens from Currumpaw River, Union county, New Mexico (one incomplete female skeleton taken Dec. 29, 1887, and skull in part, leg bones and part of skin of old male taken in 1893, by Ernest Thompson Seton). (Alta., Man., Sask.)

\***Canis lupus occidentalis** Richardson. NORTHERN TIMBER WOLF. *Loup gris du Nord*.

1829. *Canis lupus occidentalis* Richardson, Fauna Boreali-Americana, vol. 1, p. 60.

1912. *Canis occidentalis* Miller, Smiths. Misc. coll., vol. 59, No. 15, p. 4 (June 8, 1912).

1935. *Canis lupus occidentalis* Pocock, Proc. Zool. Soc. London, 1935, pt. III, p. 673. (Pocock states "There are no wolves in the British Museum referable to *occidentalis* as defined by Miller".)

*Type Locality.* Canada from the plains of the Saskatchewan to the Arctic coast. Name restricted by Miller (1912) to the form occurring at Fort Simpson. (Plesiotypes in U.S.N.M., Washington.)

*Range.* From northern Alberta along eastern side of Rocky Mountain ranges in Mackenzie Valley to Arctic Circle or beyond, intergrading with *mackenzii* north of Great Bear Lake, with *hudsonicus* east of Great Slave Lake, with *knightii* in northeastern Alberta, with *columbianus* in northwestern Alberta, and perhaps with *pambasileus* in Liard River Valley. (Alta., N.W.T., Sask.)

**Canis lupus orion** Pocock. GREENLAND WOLF. *Loup du Groenland*.

1935. *Canis lupus orion* Pocock, Proc. Zool. Soc. London, 1935, pt. III, pp. 683-684 (Sept. 1935).

*Type Locality.* Cape York, on Baffin Bay, Northwest Greenland. (Type: Br. Mus., Nat. Hist., No. 97.3.5.1.)

*Range.* Known only from the type locality. This subspecies was somewhat unconvincingly described as new by R. I. Pocock on the basis of a single imperfect skull, unsexed, but said to be apparently a male specimen. The describer states (p. 684) that "If my determination of the sex is wrong, the Greenland specimen may prove to be the female of the previously described race [*Canis lupus arctos*], a conception supported in a measure by its smaller size, lower brow, and smaller teeth." (Greenland.)

<sup>1</sup>Named for Lieut. Tom H. Manning, R.C.N.V.R., leader of several British-Canadian expeditions in Eastern Arctic Canada, collector of the type and other specimens of this wolf, as well as other valuable scientific data and material.



\***Canis lupus pambasileus** Elliot. YUKON VALLEY TIMBER WOLF. *Loup du Yukon*.

1905. *Canis pambasileus* Elliot, Proc. Biol. Soc. Wash., vol. 18, p. 79 (Feb. 21, 1905). Type: Chicago Mus. Nat. Hist., No. 13481.  
 1937. *Canis lupus pambasileus* Goldman, Journ. Mamm., 18:1, p. 45 (Feb. 14, 1937).

*Type Locality.* Susitna River, region of Mount McKinley, Alaska. (Type: Chicago Mus. Nat. Hist., No. 13481.)

*Range.* Mount McKinley region, and Yukon River Valley in central Alaska and central part of Yukon\*. (Y.T.)

**Canis lupus tundrarum** Miller. ALASKA TUNDRA WOLF. *Loup arctique d'Alaska*.

1912. *Canis tundrarum* Miller, Smiths. Misc. Coll., vol. 59, No. 15, p. 1 (June 8, 1912). (Name applied by Miller and writers following to all forms of "Barren Ground Wolf" from western Alaska to Ungava Peninsula.)  
 1935. *Canis lupus tundrarum* Pocock, Proc. Zool. Soc. London, 1935, pt. III, p. 681. ("The Barren Grounds of N. America from Alaska and the Yukon to the south of Ungava Bay.")  
 1943. *Canis lupus tundrarum* Anderson, Journ. Mamm., 24:3, pp. 386-393 (Aug. 17, 1943). (Restricted to the tundra wolf of northwestern Alaska and Arctic part of Yukon and Mackenzie district west of Mackenzie River delta.)

*Type Locality.* Point Barrow, Alaska. (Type: U.S.N.M., No. 16748; cast of topotype in N.M.C., No. 17530.)

*Range.* Tundra region of Alaska from Bering Sea and along coast of Arctic Ocean in northern Alaska and Arctic part of Yukon and Mackenzie district, Northwest Territories, Canada, west of Mackenzie River delta. (N.W.T., Y.T.)

Family MUSTELIDAE. Martens, Weasels, Minks, Otters, Skunks, Badgers, and Wolverines<sup>1</sup>

#### Subfamily Mustelinae

Genus *Martes* Pinel.<sup>2</sup> Martens

Subgenus *Martes* Pinel. Martens

1792. *Martes* Pinel, Actes Soc. Hist. Nat. Paris, vol. 1, p. 55. Type, *Martes domestica* Pinel=*Mustela foina* Erxleben.

\***Martes americana americana** (Turton). MARTEN. PINE MARTEN. AMERICAN SABLE. *Martre d'Amérique*.

1806. [*Mustela*] *americanus* Turton, Linnaeus, System of Nature, vol. 1, p. 60.  
 1885. *Mustela americana* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 610 (1885). (Part.)  
 1912. *Martes americana americana* Miller, North Amer. Land Mamm. 1911, p. 92 (Dec. 31, 1912).

*Type Locality.* Eastern North America.

*Range.* Restricted to heavily wooded parts of eastern Canada and adjacent parts of northern Maine, New Hampshire, Vermont, New York, Michigan, Wisconsin, and Minnesota; intergrading with the darker form *brumalis* in New Quebec, and with *abieticola* in the region southwest of Hudson bay (extreme western Ontario or eastern Manitoba). Specimens in Museum: Quebec—Lake Mistassini\*, Ste.-Anne River\*, Gaspé county (skulls); west branch of Bonaventure River\* (Bonaventure county). (N.B., N.S., Ont., P.Q.)

<sup>1</sup>The general classification used here is that of Miller, G. S., Jr., List of North American Recent Mammals, 1923, U.S.N.M., Bull. 128, pp. 114-143 (1924), modified from that of Pocock, R. I., "On the External Characters and Classification of the Mustelidae," Proc. Zool. Soc. London, 1921, pp. 829-837. See also Hall, E. R.: Mustelid Mammals from the Pleistocene of North America with Systematic Notes on some Recent Members of the genera *Mustela*, *Taxidea*, and *Mephitis*; Carnegie Inst. Wash., Publ. No. 473, pp. 41-119 (Nov. 20, 1936).

<sup>2</sup>For present use of the names *Martes* and *Mustela*, See Thomas, Oldfield, The Mammals of the Tenth Edition of Linnaeus; an attempt to fix the Types of the Genera and the Exact Bases and Localities of the Species; Proc. Zool. Soc. London, 1911, pp. 12-157 (1936) (March 1911).



\***Martes americana abieticola** (Preble). HUDSON BAY MARTEN. *Martre de la baie d'Hudson*.

1902. *Mustela americana abieticola* Preble, A Biological Investigation of the Hudson Bay Region, Mammals of Keewatin; North Amer. Fauna, No. 22, p. 68 (Oct. 31, 1902).

1912. *Martes americana abieticola* Miller, North Amer. Land Mamm., 1911, p. 92 (Dec. 31, 1912).

*Type Locality.* Cumberland House, Saskatchewan, Canada. (Type: U.S.N.M., No. 19256/34962.)

*Range.* Wooded parts of northern Manitoba, Saskatchewan, and Alberta; a large dark brown race, intergrading with *americana* in the region southwest of Hudson Bay, and presumably with *actuosa* around the western limits of the Hudson Bay drainage system; limits of range imperfectly known. (Alta., Man., Sask.)

\***Martes americana abietinoides** Gray. SELKIRK MARTEN. *Martre des montagnes Selkirks*.

1865. (*Martes americana*) var. 1, *abietinoides* Gray, Proc. Zool. Soc. London, p. 106.

1902. *Mustela americana abietinoides* Rhoads, Proc. Acad. Nat. Phila., p. 451 (Sept. 30, 1902).

1912. *Martes americana abietinoides* Miller, North Amer. Land Mamm., 1911, p. 93 (Dec. 31, 1912).

*Type Locality.* "Edge of the humid western slope of the Rocky Mountains, somewhere between Kicking Horse Pass and the Columbia River" (Rhoads, p. 451).

*Range.* Humid parts of mountains in southern British Columbia, particularly the Selkirk and Gold Ranges; east in Rocky Mountains to Banff and Jasper National Parks\*; northern limits of range unknown, but presumably intergrading with *actuosa* in central British Columbia. (Alta., B.C.)

\***Martes americana actuosa** (Osgood). ALASKA MARTEN. *Martre d'Alaska*.

1900. *Mustela americana actuosa* Osgood, Biological Reconnaissance of the Yukon River Region...annotated list of the mammals; North Amer. Fauna, No. 19, p. 43 (Oct. 6, 1900).

1905. *Mustela boria* Elliot, Proc. Biol. Soc. Wash., vol. 18, p. 139 (April 18, 1905). Lower Mackenzie River district, toward Arctic Ocean; exact locality unknown. Regarded by Preble, Biological Investigation of the Athabaska-Mackenzie Region, North Amer. Fauna, No. 27, pp. 236-237 (Oct. 26, 1908), as identical with *M. a. actuosa*.

*Type Locality.* Fort Yukon, Alaska. (Type: U.S.N.M., No. 6043.)

*Range.* Timbered districts of Alaska (exclusive of Kenai Peninsula and adjacent range of *M. a. kenaiensis*), Yukon, Mackenzie district of Northwest Territories, northeastern British Columbia\*, and northwestern Alberta. A large, pale brownish or greyish race, presumably intergrading with *abieticola* in southern parts of the Mackenzie district and with *abietinoides* in northern or central British Columbia. (Alta., B.C., N.W.T., Y.T.)

\***Martes americana brumalis** (Bangs). LABRADOR MARTEN. *Martre du Labrador*.

1898. *Mustela brumalis* Bangs, Amer. Nat., vol. 32, p. 502 (July 1898).

1912. *Martes brumalis* Miller, North Amer. Land Mamm., 1911, p. 93 (Dec. 31, 1912).

1934. *Martes americana brumalis* Anderson, Mammals of the Eastern Arctic and Hudson Bay; in Canada's Eastern Arctic, Dept. Interior, Ottawa, p. 95 (1934).

*Type Locality.* Okkak, Labrador, Canada. (Type: M.C.Z., E. A. and O. Bangs coll., No. 7417.)

*Range.* Wooded parts of Labrador and eastern parts of New Quebec, at least as far northwest as Chimo\*, intergrading with *M. a. americana* in northern Quebec. A large, dark race. (P.Q., Labr.)



**Martes atrata** (Bangs). NEWFOUNDLAND MARTEN. *Martre de Terre-Neuve*.1897. *Mustela atrata* Bangs, Amer. Nat., vol. 31, p. 162 (Feb. 1897).1912. *Martes atrata* Miller, North Amer. Land Mamm., 1911, p. 93 (Dec. 31, 1912).*Type Locality*. Bay St. George, Newfoundland. (Type: M.C.Z., Bangs coll., No. 5752.)*Range*. Restricted to Newfoundland; a very large, dark, insular race. (Nfld.)**\*Martes caurina caurina** (Merriam). PACIFIC COAST MARTEN. *Martre du Pacifique*.1890. *Mustela caurina* Merriam, North Amer. Fauna, No. 4, p. 27 (Oct. 8, 1890).1912. *Martes caurina caurina* Miller, North Amer. Land Mamm., 1911, p. 93 (Dec. 31, 1912).*Type Locality*. Near Gray's Harbor, Chehalis county, Washington. (Type: U.S.N.M., No. 186450.)*Range*. On western slopes of coastal mountains from western Oregon and Washington, north along British Columbia coast mountains to Alaska panhandle; extending up Fraser and Thompson River Valleys as far as Lillooet, and in Bella Coola area to Caribou and Rainbow Mountains; Chilliwack\*; Johnstone Strait\*; Kimsquit, Dean Channel; Lillooet\*; Rainbow Mountains\*; South Bentinck Arm\*; Stuie\*. (B.C.)**Martes caurina nesophila** (Osgood). QUEEN CHARLOTTE MARTEN. *Martre de la reine Charlotte*.1901. *Mustela nesophila* Osgood, North Amer. Fauna, No. 21, p. 33 (Sept. 26, 1901).1912. *Martes nesophila* Miller, North Amer. Land Mamm., 1911, p. 94 (Dec. 31, 1912).1926. *Martes caurina nesophila* Grinnell and Dixon, Univ. Calif. Publ. Zool., vol. 21, No. 16 p. 417 (March 17, 1926).*Type Locality*. Massett, Graham Island, Queen Charlotte Islands, British Columbia. (Type: U.S.N.M., No. 78066.)*Range*. Known definitely only from type locality, but may occur on some of the other islands of the Queen Charlotte group. Described as larger than *M. c. caurina*, and as always light coloured and short haired as compared with the mainland form. (B.C.)**\*Martes caurina vancouverensis** Grinnell and Dixon. VANCOUVER ISLAND MARTEN. *Martre de l'île de Vancouver*.1926. *Martes caurina vancouverensis* Grinnell and Dixon, Univ. Calif. Publ. Zool., vol. 21, No. 16, March 17, 1926, pp. 411-417.*Type Locality*. Golden Eagle mine, 20 miles south of Alberni, Vancouver Island, British Columbia. (Type: M.V.Z., No. 12474.)*Range*. So far as known, only Vancouver Island, British Columbia. The National Museum has one skull from Comox\*. (B.C.)Subgenus *Pekania* Gray. Fishers1865. *Pekania*, Gray, Proc. Zool. Soc. London, p. 107. Type, *Mustela pennanti* Erxleben.**\*Martes pennanti pennanti** (Erxleben). FISHER. PEKAN. *Pécan*. *Martre de Pennant*.1777. [*Mustela*] *pennanti* Erxleben, Syst. Regni Anim., vol. 1, p. 470.1885. *Mustela pennanti* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 610 (1885).1912. *Mustela pennanti pennanti* Miller, North Amer. Land Mamm., 1911, p. 94 (Dec. 31, 1912).*Type Locality*. Eastern Canada. (Type not designated.)*Range*. Heavily wooded districts of Canada, west to the Rocky Mountains; formerly south in Allegheny Mountains to North Carolina and in the Rocky Mountains to Yellowstone Park; north in Quebec to about the latitude of James Bay; from Manitoba westward it is considered to intergrade with *Mustela pennanti columbiana* through northern Saskatchewan and northern Alberta, and



north to Great Slave Lake, Northwest Territories. The species at the present time has an extended and somewhat discontinuous range from east to west, but comparatively narrow from north to south, due to encroachments of civilization on the southern borders of its range. Individually one of the most valuable fur-bearing mammals of Canada, but not common anywhere. (Man., N.W.T., Ont., P.Q.)

\***Martes pennanti columbiana** Goldman. BRITISH COLUMBIA FISHER. *Pécan de la Colombie-Britannique*.

1935. *Martes pennanti columbiana* Goldman, Proc. Biol. Soc. Wash., vol. 48, pp. 176-177 (Nov. 15, 1935).

*Type Locality.* Stuart Lake, near headwaters of Fraser River, British Columbia, Canada. (Type: U.S.N.M., No. 56953.)

*Range.* Rocky Mountain region and central and northern British Columbia (Fort Nelson, skulls\*), north to extreme southern parts of Yukon; south, formerly at least, to central Idaho. According to Goldman (ibid., pp. 176-177) specimens from east of the Rocky Mountains as far east as Manitoba appear to grade toward *M. p. pennanti*. (Alta., B.C., Man., N.W.T., Sask.)

**Martes pennanti pacifica** (Rhoads). PACIFIC FISHER. *Pécan du Pacifique*.

1898. *Mustela pennanti pacifica* Rhoads, Trans. Amer. Philos. Soc., n.s., vol. 19, p. 435 (Sept. 1898).

1912. *Martes pennanti pacifica* Miller, North Amer. Land Mamm., 1911, p. 94 (Dec. 31, 1912).

1935. *Martes pennanti pacifica* Goldman, New American Mustelids of the genera *Martes*, *Gulo*, and *Lutra*; Proc. Biol. Soc. Wash., vol. 48, pp. 175-186 (Nov. 15, 1935). (States that "No very reliable color differences are apparent, and differential cranial characters are slight. The skull of *M. p. pacifica* is similar in size to that of typical *pennanti*, but usually differs noticeably in the greater breadth of the rostrum and the more widely spreading zygomata.")

1937. *Martes pennanti* Grinnell, Dixon, and Linsdale, Fur-bearing Mammals of California, vol. 1, p. 217. (The authors compared 37 specimens from California with other Eastern and Western material, including 24 skulls from near Mount Adams, a place not far from the type locality of "*pacifica*", and "did not find any character of sufficient constancy to warrant recognition of a race '*pacifica*'.")

*Type Locality.* Lake Keechelus, Kittitas county, Washington. Altitude, 8,000 feet. (Type: S. N. Rhoads coll., No. 1074; Acad. Nat. Sci., Philadelphia.)

*Range.* Pacific coast and mountain region from California to southern Alaska panhandle. (B.C.)

#### Genus *Mustela* Linnaeus<sup>1</sup>

1758. *Mustela* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 45. Type, *Mustela erminea* Linnaeus. (See Thomas, Proc. Zool. Soc. London, 1911, p. 138 (March 1911).)

#### Subgenus *Mustela* Linnaeus. Weasels

#### *erminea* group. Short-tailed Ermines

Professor E. Raymond Hall (1944, Four New Ermines from the Islands of Southern Alaska; Proc. Biol. Soc. Wash., vol. 57, pp. 35, 43 (June 28, 1944)) states: "Four previously unrecognized kinds of weasels have been found on the islands of southeastern Alaska. The degree of morphological difference between any two kinds on adjoining islands is about the same as between a pair of related subspecies on the adjacent mainland. For this reason the insular forms are regarded as subspecies rather than distinct species although geographical intergradation is obviously impossible. All four are members of the group of weasels to which the specific names *cicognanii*, *richardsonii*, *streatori* and *arctica*

<sup>1</sup>Revised (under the name *Putorius*) by C. Hart Merriam, Synopsis of the Weasels of North America; North Amer. Fauna, No. 11, pp. 7-33 (June 30, 1896); and (in part) by E. Raymond Hall, Mustelid Mammals from the Pleistocene of North America, with Systematic Notes on some Recent Members of the genera *Mustela*, *Taxidea*, and *Mephitis*; Contr. Palaeontology, IV, Carnegie Inst. Wash., Publ. No. 473, pp. 41-119 (Nov. 20, 1936).



have been applied in recent years. As will be shown in a later and more extensive paper, each of the above mentioned weasels is a geographic race of a circumpolar species of which the Old World ermine, *Mustela erminea*, was the first named and that name therefore is used for the name of the species as a whole." Hall (1945, Four New Ermines from the Pacific Northwest; Journ. Mamm., vol. 26, No. 1, Feb. 23, 1945) described two new subspecies whose ranges extend into Canada, *Mustela erminea invicta* in southern Alberta and southeastern British Columbia, and *M. e. fallenda* in the coastal region of southwestern British Columbia. To Hall's statement that as "The vernacular name ermine is applied to each subspecies of *M. erminea* in the Old World, as it would seem useful to do so in America," it may be added that all the Canadian weasels large enough to be commercially valuable have for years been listed as ermine in the Canadian fur trade returns. As "ermine" in popular usage also includes the larger long-tailed weasels of the *Mustela frenata* group, it seems desirable to list them as long-tailed ermines. See also Hall (1945, A Revised Classification of the American Ermines with description of a new subspecies from the Western Great Lakes region, Journ. Mamm., vol. 26, No. 2, pp. 175-182, fig. 1) (distribution map of ranges of the 20 forms of *Mustela erminea* in America), July 13, 1945.

**\**Mustela erminea anguinae* Hall. VANCOUVER ISLAND ERMINE. Belette de l'île de Vancouver.**

1932. *Mustela cicognanii anguinae* Hall, Univ. Calif. Publ. in Zoology, vol. 38, No. 12, pp. 417-418 (Nov. 8, 1932).

*Type Locality.* French Creek, Vancouver Island, British Columbia. (Type: M.V.Z., No. 12482.)

*Range.* Vancouver Island, British Columbia. Specimens in National Museum of Canada: Bear Lake\*, Bear River\*, Cape Scott\*, Port Hardy\*, Sayward\*, Shushartie\*. (B.C.)

**\**Mustela erminea arctica* (Merriam). WESTERN ARCTIC WEASEL. TUNDRA WEASEL. ERMINE. Belette hermine.**

1896. *Putorius arcticus* Merriam, North Amer. Fauna, No. 11, p. 15 (June 30, 1896).

1904. *Putorius audax* Barrett-Hamilton, Ann. and Mag. Nat. Hist., ser. 7, vol. 13, p. 392 (May 1904). Type locality, Discovery Bay, north Greenland [probably Ellesmere Island].

1912. *Mustela audax* Miller, North Amer. Land Mamm., 1911, p. 97 (Dec. 31, 1912).

1944. *Mustela erminea arctica* Hall, Proc. Biol. Soc. Wash., vol. 57, p. 35 (June 28, 1944).

*Type Locality.* Point Barrow, Alaska. (Type: U.S.N.M., No. 14062/23010.)

*Range.* Northwestern Arctic America, including mainland and some of smaller coastal islands from Yakutat Bay on northwest Pacific coast and north to Point Barrow; Yukon except southeastern part; and presumably the extreme northwestern tip of British Columbia; in Mackenzie district, Northwest Territories, south to Good Hope near the Arctic Circle, and probably farther south in Mackenzie Mountains; north side of Great Bear Lake, thence southeast to Thelon River Valley to region of Baker Lake; and islands of western Canadian Arctic as far east as Gulf of Boothia, Prince Regent Inlet, Devon and Ellesmere Islands, to the borders of the Polar Sea. (N.W.T., Y.T.)

***Mustela erminea bangsi* Hall. MINNESOTA SHORT-TAILED ERMINE. Belette du Minnesota.**

1945. *Mustela erminea bangsi* Hall, Journ. Mamm., vol. 26, No. 2, pp. 176-179 (July 13, 1945).

*Type Locality.* Elk River, Sherburne county, Minnesota. (Type: Donald R. Dickey collection, No. 11541.)

*Range.* Southern Manitoba (Aweme, 4, Coll. Stuart Criddle; Red River Settlement, 1, U.S.N.M.), northeastern North Dakota (Eddy, Nelson, and Pembina counties), the whole of Minnesota, Wisconsin, and Michigan, and northern Iowa (Clay, Dickinson, Winnebago, and Worth counties). (Man.)



\***Mustela erminea cicognanii** Bonaparte. EASTERN SHORT-TAILED ERMINE. BONAPARTE'S WEASEL<sup>1</sup>. *Petite belette de l'Est*.

1838. *M[ustela] cicognanii* [sic] Bonaparte, Charlesworth's Mag. Nat. Hist., vol. 2, p. 37 (Jan. 1838).  
 1885. *Putorius vulgaris* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885). (Part.)  
 1891. [*Putorius*] *cicognanii* Mearns, Bull. Amer. Nat. Hist., vol. 3, p. 325 (June 5, 1891).  
 1912. *Mustela cicognanii cicognanii* Miller, North Amer. Land Mamm., 1911, p. 95 (Dec. 31, 1912).  
 1944. *Mustela erminea cicognanii* Hall, Proc. Biol. Soc. Wash., vol. 57, p. 35 (June 28, 1944).

*Type Locality*. Northeastern North America. (Location of type not known.)

*Range*. Eastern North America from boundary region between New Brunswick and Maine; New England, New York; westerly through southern Quebec and southern Ontario to Lake of the Woods region in western Ontario; intergrading with *M. e. richardsonii* along the northern edge of its range. Specimens from southern Alberta and southeastern British Columbia have commonly been referred to *cicognanii*, but are now placed under *M. e. invicta* Hall (1945). (Ont., P.Q.)

†\***Mustela erminea fallenda** Hall. SOUTHWESTERN BRITISH COLUMBIA COAST ERMINE. *Petite belette de la côte colombienne*.

1945. *Mustela erminea fallenda* Hall, Journ. Mamm., vol. 26, No. 1, pp. 79-81 (Feb. 23, 1945).  
 1896. *Putorius streator* Merriam, North Amer. Fauna, No. 11, p. 13. Mount Vernon, Skagit Valley, Skagit county, Washington. (In part.)  
 1912. *Mustela streator streator* Miller, North Amer. Land Mamm., 1911, p. 96 (Dec. 31, 1912). (In part.) Formerly considered to range north into southwestern British Columbia, but northern limit of range now placed in southern part of Whatcom county, in northwestern Washington where it intergrades with *M. e. fallenda*.

*Type Locality*. Huntingdon, just north of the International Boundary (49th parallel), southwestern British Columbia, Canada. (Type: Nat. Mus., Canada, No. 7096; collected by Charles H. Young, May 21, 1927; orig. No. 317; male, adult, skin and skull.)

*Range*. On mainland in immediate vicinity of coast from probably opposite Texada Island, British Columbia, south to Lake Whatcom, Washington, and to Mount Baker Range on International Boundary. British Columbia records: 61—Chilliwack\*, Cultus Lake\*, Horseshoe Lake\*, Stillwater\*, Huntingdon\*, Lihumitson Park\*, Mount Baker Range, Point Gray, Port Moody, Sumas, Vancouver, Washington; Whatcom county: 11. A rather small, dark-coloured weasel, with light-coloured underparts much restricted by encroachment of dark-coloured upperparts; winter pelage rarely white. (B.C.)

**Mustela erminea haidarum** (Preble). HAIDA WEASEL. *Belette des Haidas*.

1898. *Putorius haidarum* Preble, Proc. Biol. Soc. Wash., vol. 12, p. 169 (Aug. 10, 1898).  
 1912. *Mustela haidarum* Miller, North Amer. Land Mamm., 1911, p. 97 (Dec. 31, 1912).

*Type Locality*. Massett, Graham Island, Queen Charlotte Islands, British Columbia, Canada. (Type: U.S.N.M., No. 94430.)

*Range*. An insular form restricted to Queen Charlotte Islands; Graham Island (Masset), Moresby Island (Skidegate, Cumshewa Inlet). (B.C.)

\***Mustela erminea invicta** Hall. LITTLE ROCKY MOUNTAIN ERMINE. *Petite belette des Rocheuses centrales*.

1945. *Mustela erminea invicta* Hall, Journ. Mamm., vol. 26, No. 2, pp. 75-79 (Feb. 23, 1945).  
 1924. *Mustela cicognanii cicognanii* Miller, List North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 117 (March 18, 1924).

*Type Locality*. Benewah, Benewah county, Idaho. (Type: M.V.Z., No. 101122.)

<sup>1</sup>Described by Charles Lucien Jules Laurent Bonaparte (1803-1857), French naturalist, nephew of Napoleon Bonaparte, prince of Canino, author of *America Ornithology* (4 vols., Philadelphia, 1825-1833), *Catalogo metodico dei mammiferi euaopei* (1 vol., Milan 1845), with numerous other zoological works. His name is also connected with Bonaparte's gull.



*Range.* Central Rocky Mountain region from Jasper National Park (Jasper House\*, Shovel Pass\*), Banff National Park\*, High River\*, Red Deer River\*, Waterton Lakes National Park\*, over southern Alberta; east at least to southwestern Saskatchewan (Dollard\*, Shaunavon\*); west through southern British Columbia from Rocky Mountains (Crowsnest Pass\*), Glacier\*, Revelstoke\*, Yahk\*, Kootenay Valley (Creston\*), Columbia Valley (Rossland\*), Kettle River (Westbridge\*), Osoyoos-Bridgesville summit\* (Okanagan Valley\*) to Cascade Mountains (Chilliwack Lake\* and Upper Skagit Valley\*); south into Washington (east of the Cascades), northern and central Idaho and northwestern Montana. (Alta., B.C., Sask.)

***Mustela erminea polaris*** (Barrett-Hamilton). POLAR WEASEL. *Belette polaire*.

1904. *Putorius arcticus polaris* Barrett-Hamilton, Ann. and Mag. Nat. Hist., ser. 7, vol. 13, p. 393 (May 1904).  
 1912. *Mustela arctica polaris* Miller, North Amer. Land Mamm., 1911, p. 97 (Dec. 31, 1912).

*Type Locality.* Hall Land, Greenland. Latitude 82° N., longitude 59° 20' W. (Type: Br. Mus., No. 78.6.19.11.)

*Range.* Known only from North Greenland. (N. Greenland.)

**\**Mustela erminea richardsoni*** Bonaparte. RICHARDSON'S ERMINE. HUDSONIAN ERMINE. *Belette de Richardson*.

1838. *Mustela richardsonii* Bonaparte, Charlesworth's Mag. Nat. Hist., vol. 2, p. 38 (Jan. 1838).  
 1896. *Putorius richardsoni* Bangs, Proc. Soc. Wash., vol. 10, p. 16 (Feb. 25, 1896).  
 1903. *Putorius microtis* Allen, Bull. A.M.N.H., 19, p. 563 (Oct. 10, 1903).  
 1904. *Putorius arcticus imperii* Barrett-Hamilton, Ann. and Mag. Nat. Hist., ser. 7, vol. 13, p. 392 (May 1904). Fort Simpson, Mackenzie, Canada. (See Preble; North Amer. Fauna, No. 27, p. 232 (Oct. 26, 1908).)  
 1912. *Mustela cicognanii richardsonii* Miller, North Amer. Land Mamm., 1911, p. 95 (Dec. 31, 1912).  
 1913. *Mustela cicognanii mortigena* Bangs, Bull. Mus. Comp. Zool., vol. 54, p. 511 (July 1913). Bay St. George, Newfoundland.  
 1944. *Mustela erminea richardsonii* Hall, Proc. Biol. Soc. Wash., vol. 57, p. 35 (June 28, 1944).

*Type Locality.* Fort Franklin, at western end of Great Bear Lake, Mackenzie district, Northwest Territories, Canada.

*Range.* Hudsonian timber belt from southern Yukon, central Mackenzie, Great Bear and Great Slave Lakes, east to Hudson Bay about 60th parallel, coasts of Hudson and James Bays, Ungava and Labrador coast, east to Newfoundland; Nova Scotia, and New Brunswick, south to central Quebec, central Ontario, central Manitoba, Saskatchewan, and Alberta, west to Pacific coast of British Columbia (except southwestern corner) and Alaska-British Columbia boundary to Yukon. (Alta., B.C., Man., N.B., N.S., N.W.T., Ont., P.Q., Sask., Y.T., Nfld., Labr.)

**\**Mustela erminea semplei*** Sutton and Hamilton. EASTERN ARCTIC ERMINE. *Belette hermine*.

1932. *Mustela arctica semplei* Sutton and Hamilton, Annals of the Carnegie Museum, Pittsburgh, vol. 21, No. 2, pp. 79-81 (Feb. 13, 1932).  
 1935. *Mustela arctica labiata* Degerbøl, Rept. 5th Thule Exped. 1912-24, vol. 2, No. 4-5, pt. 1, pp. 25-34. (Malugsitaq, Melville Peninsula, No. 2263.)

*Type Locality.* Coral Inlet, Southampton Island, Northwest Territories, Canada. (Type: Carnegie Museum, Pittsburgh, No. 6470.)

*Range.* Southampton Island\*, Baffin Island\*, Bylot Island\*, and Melville Peninsula\*, west to foot of Wager Inlet and foot of Chesterfield Inlet in northwest corner of Hudson Bay; and to Gulf of Boothia and Prince Regent Inlet; north to Lancaster Sound; south along coast of Hudson Bay nearly to 60th parallel, nearly to northeastern corner of Manitoba. (N.W.T.)



*rixosa* group. Least Weasels<sup>1</sup>

\**Mustela rixosa rixosa* (Bangs). LEAST WEASEL. MOUSE WEASEL. *Belette pygmée*.

1896. *Putorius rixosus* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 21 (Feb. 25, 1896).  
 1911. *Mustela rixosa* Thomas, Proc. Zool. Soc. London, p. 168 (March 1911).  
 1924. *Mustela rixosa rixosa* Miller, North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 118 (March 18, 1924).

*Type Locality*. Osler, Saskatchewan, Canada. (Type: M.C.Z., Bangs coll., No. 642.)

*Range*. Northern Ontario, west side of Hudson Bay, to Mackenzie district\*, Northwest Territories, central Yukon\*, and northeastern British Columbia; fairly common locally in southern Alberta\*, Saskatchewan\*, and Manitoba; south to Montana, North Dakota, Minnesota, and Michigan. (Alta., B.C., Man., N.W.T., Ont., P.Q., Sask., Y.T.)

\**Mustela rixosa allegheniensis* (Rhoads). EASTERN LEAST WEASEL. *Belette pygmée de l'Est*.

1901. *Putorius allegheniensis* Rhoads, Proc. Acad. Sci. Phila., 1900, p. 751 (March 25, 1901).  
 1912. *Mustela allegheniensis* Miller, North Amer. Land Mamm., 1911, p. 96 (Dec. 31, 1912).  
 1907. *Mustela rixosa allegheniensis* Ward, Bull. Wisconsin Nat. Hist. Soc., vol. 5, p. 63 (Jan. 1907).  
 1926. *Mustela rixosa allegheniensis* Swenk, Journ. Mamm., vol. 7, No. 4, pp. 328-329 (Nov. 23, 1926).

*Type Locality*. Near Beallsville, Washington county, Pennsylvania. (Type: A.N.S. Phila., No. 6195.)

*Range*. Transition zone and humid part of Upper Austral zone (Carolinian faunal area) from western Pennsylvania to western Wisconsin; south in the Alleghenies to western North Carolina; north to southern Quebec. The first specimen recorded from Canada was taken by Jos. Rochon near Ste.-Véronique\*, Labelle county, Sept. 3, 1927; a second specimen was taken at Natashquan\*, Saguenay county, by C. G. Harrold, Aug. 2, 1928. (P.Q.)

\**Mustela rixosa eskimo* (Stone). ARCTIC LEAST WEASEL. *Belette pygmée arctique*.

1900. *Putorius rixosus eskimo* (Stone), Proc. Acad. Nat. Sci. Phila., p. 44 (March 24, 1900).  
 1912. *Mustela rixosa eskimo* Miller, North Amer. Land Mamm., 1911, p. 96 (Dec. 31, 1912).

*Type Locality*. Point Barrow, Alaska. (Type: E. A. McIlhenny coll., No. 848.)

*Range*. Arctic zone of western and northern Alaska from Norton Sound (St. Michaels) and Kuskokwim (Bethel), north to Icy Cape\* and Point Barrow; east to Colville delta (A.M.N.H. coll.) and Martin Point\*, Alaska, a little west of the Alaska-Yukon boundary. A specimen taken in summer of 1938 on middle Peel River about 30 miles south of Aklavik\* in smaller size and darker colour of coat shows an approach to *M. r. rixosa*. Probably occurs on Arctic coast of Yukon, as it has been taken on both east and west sides of that area. (N.W.T.)

*frenata* group. Long-tailed Ermines

\**Mustela frenata altifrontalis* Hall. NORTHWESTERN LONG-TAILED WEASEL. *Belette à queue longue du nord-ouest*.

1936. *Mustela frenata altifrontalis* Hall, Contr. to Palæontology, IV, Carnegie Inst. of Wash., Publ. No. 473, pp. 94-95 (Nov. 30, 1936).

*Type Locality*. Tillamook, Tillamook county, Oregon. (Type: M.V.Z., No. 42093.)

*Range*. Altitudinally from sea-level up to at least 4,800 feet (Mount Baker), principally in the Transition zone of the humid coastal region of Oregon, Washington, and extreme southwestern British Columbia (Hall).

<sup>1</sup>Revised by Swenk, M. H., Notes on *Mustela campestris* Jackson, and on the American forms of Least Weasels; Journ. Mamm., vol. 7, No. 4, pp. 313-330; for habits See N. and S. Criddle, Weasels of Southern Manitoba; Can. Field-Nat., vol. 39, No. 6, pp. 142-148 (Sept. 1925). Very small weasels with extremely short tail without black tip on tail.



"Remarks. The animal here called *altifrontalis* has long gone by the name of *Mustela saturata* (Merriam). The latter name is now restricted to the long-tailed weasel found to the southeastward in northern California and southern Oregon and separated geographically from *altifrontalis* by the intervening subspecies *Mustela frontalis oregonensis*. Specimens are available showing intergradation with each adjoining subspecies of *Mustela frenata*. For example, of four specimens recorded from British Columbia, only one, that from Chilliwack\*, is typical of *altifrontalis*. The other three are intergrades with *nevadensis*.

"Specimens Examined. Total number, 51, by localities from north to south as follows: British Columbia—Chilliwack\*, 1; Lihumpton Park\*, 4,750 feet, 2; Cultus Lake\*, 1—" (Hall, 1936, p. 95). (B.C.)

**\**Mustela frenata longicauda* Bonaparte.** PRAIRIE LONG-TAILED WEASEL. *Belette à queue longue des Prairies*.

1838. *Mustela longicauda* Bonaparte, Charlesworth's Mag. Nat. Hist., vol. 2, p. 38 (Jan. 1838).  
 1835. *Putorius longicauda* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885).  
 1912. *Mustela longicauda* Miller, North Amer. Land. Mamm., 1911, p. 98 (Dec. 31, 1912).  
 1936. *Mustela frenata longicauda* Hall, Contr. to Palæontology IV, Carnegie Inst. Wash., Publ. No. 473, p. 105 (Nov. 30, 1936). (Places all North American long-tailed weasels as subspecies of *Mustela frenata* Lichtenstein, 1831, Pl. 42, Darstellung neuer oder wenig bekannter Säugethiere, Pl. 42.)

*Type Locality.* Carlton House, on North Saskatchewan River, Saskatchewan.

*Range.* Transition and Sonoran zones of the Great Plains, southward from central Alberta\*, including eastern slope of Rocky Mountains, central Saskatchewan\*, and southwestern Manitoba\*, through eastern Montana, the Dakotas, and Nebraska into southeastern Wyoming, northeastern Colorado, and western Kansas. (Alta., Man., Sask.)

**\**Mustela frenata nevadensis* Hal.** NEVADA LONG-TAILED WEASEL. *Belette à queue longue du Nevada*.

1936. *Mustela frenata nevadensis* Hall, Contr. to Palæontology, IV, Carnegie Inst. Wash., Publ. No. 473, pp. 91-93 (Nov. 30, 1936).

*Type Locality.* Three miles east of Baker, White Pine county, Nevada. (Type: M.V.Z., No. 41503.)

*Range.* "Altitudinally, 700 feet at Wenatchee, Washington, to the highest parts of the mountains of western United States; Upper Sonoran zone to Arctic-Alpine zone; southern British Columbia in the Cascades and territory east to Monashee Mountains and Nelson (Kootenay Lake); southward in the Cascades of northern Washington; over western Washington, Idaho, Utah, and Nevada to northeastern Arizona and northern New Mexico; westward from the eastern base of the Rocky Mountains in Colorado to the western base of the Sierra Nevada and Cascades of California, and to the Cascades of southern Oregon" (Hall, 1936, p. 91). Northern marginal ranges given as "British Columbia, Nelson, Sicamous, Hope-Princeton summit\*, 5,600 feet." Other B.C. specimens in N.M.C. coll. from Cascade\*, Myers Creek\*, Osoyoos-Bridenville summit, 3,500 feet\*, Rossland\*, Similkameen\*.

Hall states (ibid., p. 93) that "The populations here assigned to *nevadensis* have been called *arizonensis* since Mearns proposed this name in 1891. However, study of the now more adequate material shows that true *arizonensis* is a much smaller animal with a differently proportioned skull." Hall (p. 106) gives revised range of *Mustela frenata arizonensis* (Mearns) as "Transition to Hudsonian zones of Arizona and extreme western New Mexico, along the Colorado River and south of the Little Colorado River, from San Francisco Mountain region along Mogollon Plateau to extreme western New Mexico." (B.C.)



\***Mustela frenata noveboracensis** (Emmons). NEW YORK LONG-TAILED WEASEL. *Belette hermine à queue longue*. (In Quebec often called *La fouine*, from its resemblance to the European stoat, *Putorius erminea*.)

1840. *Putorius noveboracensis* Emmons, Rept. Quadr. Massachusetts, p. 45.  
 1885. *Putorius erminea* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885). (In part.)  
 1912. *Mustela noveboracensis noveboracensis* Miller, North Amer. Land Mamm., 1911, p. 97 (Dec. 31, 1912).  
 1936. *Mustela frenata noveboracensis* Hall, Contr. to Palæontology, IV, Carnegie Inst., Wash., Publ. No. 473, p. 104 (Nov. 30, 1936).

*Type Locality.* Southern New York.

*Range.* Eastern United States from southern Maine south at least through the Transition zone and west to Illinois. In Canada ranges through the "Eastern Townships" of Quebec and the southern parts of counties north of Ottawa River; in Ontario north to Ottawa River and west to Georgian Bay. (Ont., P.Q.)

\***Mustela frenata occisor** (Bangs). NORTHEASTERN LONG-TAILED ERMINE. *Belette hermine à queue longue du nord-est. Fouine*.

1899. *Putorius occisor* Bangs, Proc. New England Zool. Club, vol. 1, p. 54 (June 9, 1899).  
 1912. *Mustela occisor* Miller, North Amer. Land Mamm., 1911, p. 98 (Dec. 31, 1912).  
 1936. *Mustela frenata occisor* Hall, Contr. to Palæontology, IV, Carnegie Inst., Wash., Publ. No. 473, p. 104 (Nov. 30, 1936).

*Type Locality.* Bucksport, near mouth of Penobscot River, Hancock county, Maine. (Type: M.C.Z., No. 9102, coll. of E. A. and O. Bangs.)

*Range.* Central and northern Maine (Bucksport, Mooshead Lake), north locally to south side of lower St. Lawrence River in Quebec (one specimen examined from Kamouraska\*, Kamouraska county, taken by W. Labrie, Dec. 7, 1943); large weasels occurring in western New Brunswick probably belong to this form. (P.Q.)

\***Mustela frenata oribasa** (Bangs). BANGS' LONG-TAILED WEASEL. LARGE MOUNTAIN LONG-TAILED WEASEL. *Belette à queue longue de Bangs*.

1899. *Putorius (Arctogale) longicauda oribasus* Bangs, Proc. New England Zool. Club, vol. 1, p. 81 (Dec. 27, 1899).  
 1912. *Mustela longicauda oribasus* Miller, North Amer. Land Mamm., 1911, p. 98 (Dec. 31, 1912).  
 1936. *Mustela frenata oribasa* Hall, Contr. to Palæontology, IV, Carnegie Inst. Wash., Publ. No. 473, p. 105 (Nov. 30, 1936).

*Type Locality.* Source of Kettle River, British Columbia, Canada. (Type: M.C.Z., Bangs coll., No. 9058.)

*Range.* Canadian and Hudsonian zones from near latitude 53° N. in British Columbia along Fraser River south to Lillooet\*, in the Cariboo and Monashee Mountains, probably in the Selkirks, and through the Rocky Mountains of Montana into extreme northern Wyoming. (B.C.)

**Mustela frenata spadix** (Bangs). MINNESOTA LONG-TAILED WEASEL. *Belette à queue longue du Minnesota*.

1896. *Putorius longicauda spadix* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 8 (Feb. 25, 1896).  
 1912. *Mustela longicauda spadix* Miller, North Amer. Land Mamm., 1911, p. 98 (Dec. 31, 1912).  
 1936. *Mustela frenata spadix* Hall, Contr. to Palæontology, IV, Carnegie Inst. Wash., Publ. No. 473, p. 105 (Nov. 30, 1936).

*Type Locality.* Fort Snelling, Hennepin county, Minnesota. (Type: A.M.N.H., No. 3265/1786.)

*Range.* "Upper Austral and Transition zones of Minnesota, northern and western Iowa, southeastern North Dakota, eastern part of South Dakota, and northeastern Nebraska" (Hall, 1936, p. 105). A midwestern race, somewhat smaller than *noveboracensis* and darker than *longicauda*; recorded once from Ontario (North Bay) by Miller (1899, p. 44), and apt to occur elsewhere in western Ontario and southeastern Manitoba. (Ont.)



Subgenus *Lutreola* Wagner.<sup>1</sup> Minks

1841. *Lutreola* Wagner, Schreber's Säugthiere, Suppl., vol. 2, p. 239. Type, *Mustela lutreola* Linnaeus.

\***Mustela vison vison** Schreber. COMMON EASTERN MINK. *Vison commun.*

1777. *Mustela vison* Schreber, Säugthiere, Pl. 127b.  
 1885. *Putorius vison* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885). (Part.)  
 1911. *Lutreola vison borealis* Brass, Aus dem Reiche der Pelze, p. 504 (April 1911). Northeastern North America.  
 1912. *Mustela vison vison* Miller, North Amer. Land Mamm., 1911, p. 101 (Dec. 31, 1912).

*Type Locality.* Eastern Canada. (Type not designated.)

*Range.* Eastern Canada, west to eastern and southern Ontario; south in interior to Catskill Mountains, New York, and to northern Pennsylvania. Not found on the coast south of New Brunswick. Lack of material from western Ontario makes it impossible to state at present whether *M. v. vison* meets or intergrades with *M. v. letifera* in the region north of Lakes Huron and Superior, or where it intergrades with *M. v. lacustris* west of the Great Lakes. (Ont., N.B., N.S., P.E.I., P.Q.)

\***Mustela vison energumenos** (Bangs). BRITISH COLUMBIA MINK. *Vison de la Colombie-Britannique.*

1896. *Putorius vison energumenos* Bangs, Proc. Boston Soc. Nat. Hist., vol. 27, p. 5 (March 1896).  
 1912. *Mustela vison energumenos* Miller, North Amer. Land Mamm., 1911, p. 101 (Dec. 31, 1912).

*Type Locality.* Sumas, British Columbia, Canada. (Type: M.C.Z., Bangs coll., No. 3555.)

*Range.* Western North America, from southern Yukon and northern British Columbia south to the Sierra Nevada Mountains in California and Rocky Mountains in New Mexico. (B.C., Y.T.)

\***Mustela vison evagor** Hall. VANCOUVER ISLAND MINK. *Vison de l'île de Vancouver.*

1932. *Mustela vison evagor* Hall, Univ. Calif. Publications in Zoology, vol. 38, No. 12, pp. 418-419 (Nov. 8, 1932).

*Type Locality.* Little Qualicum River (8 to 9 miles west of Parksville), Vancouver Island, British Columbia. (Type: M.V.Z., No. 12479.)

*Range.* Vancouver Island, British Columbia. (B.C.)

\***Mustela vison ingens** (Osgood). ALASKA MINK. *Vison d'Alaska.*

1900. *Lutreola vison ingens* Osgood, North Amer. Fauna, No. 19, p. 42 (Oct. 6, 1900).  
 1912. *Mustela vison ingens* Miller, North Amer. Land Mamm., 1911, p. 101 (Dec. 31, 1912).

*Type Locality.* Fort Yukon, Alaska. (Type: U.S.N.M., No. 6530.)

*Range.* Northern, western, and central Alaska; northern Yukon and northwestern Mackenzie\*; south to the Alaska Peninsula and to Fort Good Hope, Mackenzie; east to Anderson River. (N.W.T., Y.T.)

\***Mustela vison lacustris** (Preble). HUDSON BAY MINK. *Vison de la baie d'Hudson.*

1902. *Lutreola vison lacustris* Preble, North Amer. Fauna, No. 22, p. 66 (Oct. 31, 1902).  
 1912. *Mustela vison lacustris* Miller, North Amer. Land Mamm., 1911, p. 101 (Dec. 31, 1912).

*Type Locality.* Echimamish River (near Painted Stone portage), Manitoba, Canada. (Type: U.S.N.M., No. 106872.)

*Range.* Interior of Canada from western shores of Hudson Bay northwest through wooded parts of Keewatin district and Mackenzie district to Great Slave Lake, and southward through Alberta (Wood Buffalo Park\*), (and probably northeastern corner of British Columbia), Saskatchewan, and Manitoba to southern North Dakota. (Alta., Man., N.W.T., Sask.)

<sup>1</sup>Revised by Hollister, A Synopsis of the American Minks, Proc. U.S. Nat. Mus., vol. 44, pp. 471-480 (April 18, 1913).



†\**Mustela vison lowii* Anderson.<sup>1</sup> UNGAVA MINK. *Vison d'Ungava*.

1945. *Mustela vison lowii* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, 1944, pp. 57-59 (Nov. 2, 1945).

*Type Locality.* Mistassini Post, Mistassini Lake, Mistassini district, Quebec, Canada, about 215 miles east of Rupert House, James Bay. (Type: N.M.C., No. 11558.)

*Range.* Northern Labrador and northern Quebec in wooded districts from Chimo\* near southern end of Ungava Bay south to Lake Mistassini\* and Lake Waswanipi\* southeast of James Bay. (Labr., P.Q.)

### Subgenus *Putorius* Cuvier<sup>2</sup>

1817. *Putorius* Cuvier, Règne Animal, vol. 1, p. 147. Type, *Mustela putorius* Linnaeus.

\**Mustela nigripes* (Audubon and Bachman). BLACK-FOOTED FERRET. *Furet à pattes noires*.

1851. *Putorius nigripes* Audubon and Bachman, Quadrupeds North America, vol. 2, pp. 297-299, Pl. 93.

1912. *Mustela nigripes* Miller, North Amer. Land Mamm., 1911, p. 102 (Dec. 31, 1912).

*Type Locality.* Fort Laramie, Laramie county, Wyoming (See Hayden, Trans. Amer. Philos. Soc., n.s., vol. 12, p. 13 (1862)). Described from a single specimen, but its subsequent history is unknown.

*Range.* Great Plains, from western North Dakota to eastern base of Rocky Mountains, south to Texas and New Mexico, and north to southeastern Alberta and southwestern Saskatchewan; most northern marginal records, Regina, Saskatchewan, and Rosebud, Alberta. The first Canadian record was a specimen from Blackfoot Reserve near Gleichen, Alberta, taken in 1907, and now in Chicago Mus. Nat. Hist. The second record was about 4 miles from Regina, Saskatchewan, in 1924, now in Provincial Museum, Regina. From 1924 to 1937, the National Museum of Canada obtained two authentic records from Alberta and twenty-two from Saskatchewan, including eleven specimens from Saskatchewan: Big Beaver\*, Climax\*, Frontier\*, Senate\*, Shaunavon\*, South Fork\*, Wood Mountain\*. (Alta., Sask.)

### Subfamily *Guloninae*. Wolverines

#### Genus *Gulo* Pallas<sup>3</sup>

1780. *Gulo* Pallas. Spicil. Zool., fasc. 14, p. 25. Type, *Gulo sibiricus* Pallas=*Ursus gulo* Linnaeus.

\**Gulo luscus luscus* (Linnaeus). WOLVERINE. *Carcajou*. *Glouton commun*.

1766. [*Ursus*] *luscus* Linnaeus, Syst. Nat., ed. 12, vol. 1, p. 71.

1823. *Gulo luscus* Sabine, Franklin's Narrative Journ. to Polar Sea, p. 650.

1885. *Gulo luscus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885).

1918. *Gulo auduboni* Matschie, Sitzungsber. Gesellsch. naturforsch. Freunde z. Berlin, p. 153. Newfoundland.<sup>4</sup>

<sup>1</sup>Named in honour of Dr. Albert Peter Low (1861-1942), former director of the Geological Survey of Canada, deputy minister of Department of Mines, geologist and pioneer explorer of northern Quebec, Labrador, the eastern Arctic, and other parts of Canada, and to whom the National Museum is indebted for the first specimens obtained of several species from some of these areas, including a topotype of the subspecies here described.

<sup>2</sup>Revised by Merriam, C. H., Synopsis of the weasels of North America; North Amer. Fauna, No. 11, pp. 7-9 (June 30, 1896).

<sup>3</sup>Revised by Paul Matschie, Sechs neue Arten der Gattung *Gulo*, Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin, 1918, pp. 141-155, Pls. 1-5 (July 30, 1918). In this paper the characters of twelve Old and New World forms are given, four being described as new. In considering the North American races, the author had inadequate material for comparison, and appears to have given too little weight to the great individual variability of the wolverine both in colour and cranial characters. His keys, based on slight colour characters alone, although accompanied by some measurements of skulls, seem to the present writer to be insufficient for separating the North American forms, and later evidence shows that some of the geographical races are untenable.

<sup>4</sup>Described by Matschie on the strength of Audubon and Bachman's mention of specimens said to have been obtained in Newfoundland (Vivip. Quadr. North Amer., vol. 1, 1847, pp. 203-211). Evidence of the actual occurrence of the species in Newfoundland is very doubtful, as skins are transported for long distances in the fur trade and origins are hard to trace. Bangs does not mention it in his List of Mammals of Newfoundland, 1913.



1918. *Gulo bairdi* Matschie, Sitzungsber. Gesellsch. naturforsch. Freunde z. Berlin, p. 153. Fort Union, near present town of Buford, Williams county, North Dakota.<sup>1</sup>
1918. *Gulo niedicki* Matschie, Sitzungsber. Gesellsch. naturforsch. z. Berlin, p. 148. Dease Lake, British Columbia, Canada.<sup>2</sup>

*Type Locality.* Hudson Bay. (Location of type specimen not known.)

*Range.* From shores of Arctic Ocean, straggling north to northern Baffin Island, Ellesmere Island, and Melville Island, east to Labrador coast, and west to Alaska; south formerly to extreme northeastern United States, Michigan, Wisconsin, Minnesota, and North Dakota, and down the Rocky Mountains into Colorado. (Alta., B.C., Man., N.W.T., Ont., P.Q., Sask., Y.T.)

***Gulo luscus luteus* Elliot.** PACIFIC WOLVERINE. SOUTHERN WOLVERINE. *Carcajou de Californie.*

1903. *Gulo luteus* Elliot, Field Columb. Mus., Publ. 87, zool. ser., vol. 3, p. 260 (Dec. 1903).
1937. *Gulo luscus luteus* Grinnell, Dixon, and Linsdale, Fur-bearing Mammals of California; Univ. Calif. Press, vol. 1, p. 251. (Recognizable in the West as a southern subspecies on the basis of skull characters alone, but unable to ascribe any differences in coloration; in California restricted to central and southern Sierra Nevada Mountains, chiefly above the 8,000-foot level, from the vicinity of Lake Tahoe south through the Mount Whitney region.)

*Type Locality.* Mount Whitney, Tulare county, California. (Type: Chicago M.N.H., No. 10942.)

*Range.* From the Sierra Nevada Mountains in California northward.<sup>3</sup> (B.C.)

**\**Gulo luscus vancouverensis* Goldman.** VANCOUVER ISLAND WOLVERINE. *Glouton de l'île de Vancouver.*

1935. *Gulo luscus vancouverensis* Goldman, Proc. Biol. Soc. Wash., vol. 48, pp. 177-178 (Nov. 15, 1935).

*Type Locality.* Great Central Lake, Vancouver Island, British Columbia, Canada. (Type: U.S.N.M., No. 211499.)

*Range.* Restricted to Vancouver Island. One adult female (skin, skull, and skeleton) in N.M.C., taken at Fanny Bay\*, east side of Vancouver Island, in February 1938; a comparatively small, dark, insular race. (B.C.)

#### Subfamily Lutrinae. Otters

##### Genus *Lutra* Brisson

1762. *Lutra* Brisson, Regn. Anim., ed. 2, p. 201. Type; *Lutra* Brisson=*Mustela lutra* Linnaeus.

**\**Lutra canadensis canadensis* (Schreber).** EASTERN CANADA OTTER. *Loutre du Canada.*

1776. *Mustela lutra canadensis* Schreber, Säugthiere, Pl. 126b.
1823. *Lutra canadensis* Sabine, Franklin's Narrative, Journ. to Polar Sea, p. 653.
1863. *Lutra destructor* Barnston, Can. Nat. and Geol., vol. 8, p. 152. Michipicoten, Lake Superior, Ontario.
1912. *Lutra canadensis canadensis* Miller, North Amer. Land Mamm., 1911, p. 113 (Dec. 31, 1912).

*Type Locality.* Eastern Canada.

<sup>1</sup>Described by Matschie on the basis of an unnamed specimen described by Baird (Mammals of North Amer., 1859, pp. 181-182) and compared by the former with the hypothetical *Gulo auduboni*, and named, as he indicates, for convenience in mammalogical reference. It is evident that the describer was not able to examine specimens from either range. The type locality of *Gulo bairdi* is not far from the borders of southeastern Saskatchewan, but the wolverine is not a Plains species, and Vernon Bailey (Mammals of North Dakota, North Amer. Fauna, No. 49, 1926, p. 179) refers to Baird (loc. cit., 182) stating that the specimen probably as Baird says, was brought to Fort Union from some of the posts toward the Rocky Mountains.

<sup>2</sup>The description and figures of this specimen do not show characters inconsistent with *G. luscus luscus*. Swarth (1926, Birds and Mammals from the Atlin Region, Northern British Columbia, p. 147) refers a skull from Carcross, Yukon, as *Gulo luscus*.

<sup>3</sup>Grinnell, Dixon, and Linsdale (1937, p. 254) state that skulls from California are slightly smaller than skulls of corresponding ages from Hudson Bay, Alberta, British Columbia, and Alaska, and that the dentition is noticeably and uniformly lighter. The name *luteus* (Lat., buffy) was given by Elliot on account of the amount of buffy colour in the fur. Allan Brooks (in litt.) states that pale-coloured (golden-red) skins of wolverines occur occasionally in British Columbia, and he considers them mutants; also that the wolverine of California is a normally coloured animal. If this race proves to be a distinct form consistently recognizable west of the Rocky Mountains, the western British Columbia wolverines must probably be referred to it. We have insufficient Canadian material available for forming an opinion.



*Range.* Formerly widely distributed in all parts of Eastern Canada south of central Quebec that are well forested and watered, and still exists sporadically in many settled districts from Cape Breton Island, Nova Scotia, to western Ontario. Goldman (1935, Proc. Biol. Soc. Wash., vol. 48, p. 179) states that 29 specimens from central Manitoba (Cross Lake, Oxford House, and Norway House) grade toward typical *L. c. canadensis*, but in size are more properly referable to *L. c. preblei*. (Man., N.B., N.S., Ont., P.Q.)

†\****Lutra canadensis chimo*** Anderson. UNGAVA LAND OTTER. *Loutre d'Ungava*.

1945. *Lutra canadensis chimo* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, 1944, p. 59 (Nov. 3, 1945).

*Type Locality.* Chimo, Ungava district, Quebec, about 30 miles south of tip of Ungava Bay, Quebec, Canada. (Type: N.M.C., No. 11059; male, adult, skull only.)

*Range.* Northern Labrador and northern Quebec in wooded districts from Chimo\* (six skulls collected by John Blackhall of Hudson's Bay Co., 1929-1933), Ungava Bay south to Hamilton River and Lake Mistassini\* southeast of James Bay (six skulls, one collected by A. P. Low in 1885, and five by W. Jeffreys of Hudson's Bay Co., 1930-1932). Robert Bell (1885, Ann. Rept. Geol. and Nat. Hist. Surv. of Canada, App. 2, p. 50DD) states that the otter is found on the Labrador coast as far north as Okak, and on the east side of Hudson Bay it is rare as far north as Little Whale River. (Labr., P.Q.)

***Lutra canadensis evexa*** Goldman. STUART LAKE OTTER. *Loutre du lac Stuart*.

1935. *Lutra canadensis evexa* Goldman, Proc. Biol. Soc. Wash., vol. 48, p. 182 (Nov. 15, 1935).

*Type Locality.* Stuart Lake, near headwaters of Fraser River, British Columbia, Canada. (Type: U.S.N.M., No. 47018.)

*Range.* Western slope of Rocky Mountains in central British Columbia. (B.C.)

\****Lutra canadensis pacifica*** (Rhoads). PACIFIC LAND OTTER. *Loutre du Pacifique*.

1898. *Lutra hudsonica pacifica* Rhoads, Trans. Amer. Philos. Soc., n.s., vol. 19, p. 429 (Sept. 1898).

1898. *Lutra canadensis pacifica* Allen, Bull. Amer. Mus. Nat. Hist., vol. 10, p. 460 (Nov. 10, 1898).

*Type Locality.* Lake Keechelus, Kittitas county, Washington. Altitude 8,000 feet. (Type: Acad. Nat. Sci. Phila., S. N. Rhoads coll., No. 616.)

*Range.* From Oregon and Washington north along the western side of the Coast Range in British Columbia (Stuic\*, Bella Coola River, skin and skull) to southeastern Alaska. (B.C.)

\****Lutra canadensis preblei*** Goldman. MACKENZIE OTTER. *Loutre de Mackenzie*.

1935. *Lutra canadensis preblei* Goldman, Proc. Biol. Soc. Wash., vol. 48, pp. 178-179 (Nov. 15, 1935).

*Type Locality.* Near McTavish Bay, Great Bear Lake (on canoe route from Lake Hardisty), Mackenzie district, Northwest Territories, Canada. (Type: U.S.N.M., No. 147413.)

*Range.* Mackenzie River basin and east to Hudson Bay; south to Alberta (Conibear Lake\*, Wood Buffalo Park), Saskatchewan, and northern Manitoba (Bird\*, Hudson Bay Railway); intergrading with *L. c. canadensis* in east-central Manitoba, and probably with the Nebraska otter, *L. c. interior* Swenk (1920), farther south. Goldman (1935, p. 179) assigns specimens from Elk River, Minnesota, to *L. c. interior*. There are no Canadian records of *interior*, but if there are any native otters or skeletal remains from the scantily wooded waters on the southern border of the Prairie Provinces their identity and possible relation to *L. c. interior* are worth investigation. (Alta., Man., N.W.T., Sask.)



\****Lutra canadensis yukonensis*** Goldman. YUKON VALLEY OTTER. *Loutre du Yukon*.

1935. *Lutra canadensis yukonensis* Goldman, Proc. Biol. Soc. Wash., vol. 48, p. 180 (Nov. 15, 1935).

*Type Locality*. Unalakleet, Norton Sound, Alaska. (Type: U.S.N.M., No. 21480.)

*Range*. Bering Sea coast, Alaska Peninsula, Kuskokwim, and Yukon River drainage, east to central Yukon, Canada. Goldman (1935, p. 180) refers one specimen from Pelly River at mouth of Macmillan River to *yukonensis*, and the National Museum of Canada has one skull from Beaver Creek\*, Teslin Lake, near the Yukon-British Columbia boundary. (B.C., Y.T.)

***Lutra degener*** Bangs. NEWFOUNDLAND LAND OTTER. *Loutre de Terre-Neuve*.

1898. *Lutra degener* Bangs, Proc. Biol. Soc. Wash., vol. 12, p. 35 (March 24, 1898).

*Type Locality*. Bay St. George, Newfoundland. (Type: M.C.Z., Bangs coll., No. 6965.)

*Range*. Known only from Newfoundland. (Nfld.)

***Lutra periclyzomae*** Elliot. QUEEN CHARLOTTE LAND OTTER. *Loutre de la reine Charlotte*.

1905. *Lutra periclyzomae* Elliot, Proc. Biol. Soc. Wash., vol. 18, p. 80 (Feb. 21, 1905).

*Type Locality*. Gawi, west coast of Moresby Island, Queen Charlotte Islands, British Columbia, Canada. (Type: Chicago Mus. Nat. Hist., No. 491.)

*Range*. Known only from Queen Charlotte Islands, British Columbia.<sup>1</sup> (B.C.)

***Lutra vancouverensis*** Goldman. VANCOUVER ISLAND LAND OTTER. *Loutre de l'île de Vancouver*.

1935. *Lutra vancouverensis* Goldman, Proc. Biol. Soc. Wash., vol. 48, p. 186 (Nov. 15, 1935).

*Type Locality*. Quatsino, northwestern part of Vancouver Island, British Columbia, Canada. (Type: U.S.N.M., No. 137775.)

*Range*. Definitely known only from Vancouver Island. (B.C.)

### Subfamily **Enhydrinae**. Sea Otters

#### Genus *Enhydra* Fleming<sup>2</sup>

1822. *Enhydra* Fleming, Philos. of Zool., vol. 2, p. 187. Type, *Mustela lutris* Linnaeus.

\****Enhydra lutris lutris*** (Linnaeus). NORTHERN SEA OTTER. *Loutre marine du Nord*.<sup>3</sup>

1758. [*Mustela*] *lutris* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 45.

1843. *Enhydra lutris* Gray, List Spec. Mamm. Brit. Mus., p. 72.

1885. *Enhydris lutris* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885).

1924. *Enhydra lutris lutris* Miller, List North Amer. Recent Mamm. (1923), U.S.N.M., Bull. 128, p. 131.

*Type Locality*. Kamchatka.

*Range*. Formerly from Vancouver Island north along the coast of British Columbia and southern Alaska and adjacent islands to the end of the Aleutian Islands chain. A few years ago was considered on the verge of extinction, but during recent years strict protective laws have been enforced rigidly enough to show a few small colonies on the Alaskan coast. Considered to be the most valuable fur-bearing mammal in the world. (B.C.)

<sup>1</sup>Goldman (1935, New American Mustelids of the genera *Martes*, *Gulo*, and *Lutra*; Proc. Biol. Soc. Wash., vol. 48, pp. 175-186 (Nov. 15, 1935)) described six new subspecies of *Lutra canadensis* from British Columbia and western Alaska, three of them being insular forms (Montagu Island, Kodiak Island, and Shumagin Islands, Alaska), and two full species, *Lutra mira*, from Prince of Wales Island, Alaska, and *Lutra vancouverensis* from Vancouver Island, considering the Queen Charlotte Islands form, *Lutra periclyzomae*, also worthy of retention as distinct insular species.

<sup>2</sup>"On account of the existence of the earlier name *Enhydris* (Merrem, 1820), applied to another genus, *Enhydra* has been replaced by *Lutax* Gloger (Nova Acta phys. med. acad. caes. Leop.-Carol., vol. 13, pt. 2, p. 511 (1827)). This is not in accordance with the provisions of the International Code (Art. 36, with accompanying recommendation)".—Miller, U.S. Nat. Mus., Bull. 128, 1924, p. 130.

<sup>3</sup>Very few museums have skins of this species. The material in the National Museum of Canada is limited to one complete skull and one additional lower jaw found near Massett, Graham Island, Queen Charlotte Islands.



**Enhydra lutris nereis** (Merriam). SOUTHERN SEA OTTER. *Loutre marine du Sud*.

1904. *Lutax lutris nereis* Merriam, Proc. Biol. Soc. Wash., vol. 17, p. 159 (Oct. 6, 1904).  
 1923. *Enhydra lutris nereis* Grinnell, Univ. Calif. Publ. Zool., vol. 21, p. 316 (Jan. 27, 1923).

*Type Locality.* San Miguel Island, Santa Barbara Islands, California. (Type: U.S.N.M., No. 133508.)

*Range.* Pacific coast from southern California, north to at least Puget Sound; formerly abundant, but now very rare; a small colony recently discovered on California coast south of Monterey. Taylor and Shaw, Provisional List of Land Mammals of Washington, 1929, p. 12, state that *L. l. nereis* was "Formerly found all along the coast [of Washington]; specimens examined from Straits of Juan de Fuca on the north to Port Grenville on the south; now extirpated." Bailey (1936, p. 303, Mammals of Oregon) states that sufficient specimens have not been brought together to show the area of intergradation of *nereis* with *lutris*, but all available specimens from the coast of California, Oregon, and Washington can be safely referred to *nereis*. (B.C.)

Subfamily **Mephitinae**. SkunksGenus *Spilogale* Gray.<sup>1</sup> Spotted Skunks

1865. *Spilogale* Gray, Proc. Zool. Soc. London, p. 150. Type, *Mephitis interrupta* Rafinesque.

\****Spilogale phenax olympica*** Elliot. PUGET SOUND SPOTTED SKUNK. *Petite mouffette tachetée du passage Puget*.

1899. *Spilogale olympica* Elliot, Field Columb. Mus., Publ. 32, zool. ser., vol. 1, p. 270 (March 1899).  
 1906. *Spilogale phenax olympica* Howell, North Amer. Fauna, No. 26, p. 33 (Nov. 24, 1906).

*Type Locality.* Lake Sutherland, Olympic Mountains, Clallam county, Washington. (Type: Chicago M.N.H., type specimen not designated but six numbered and measured in description.)

*Range.* Olympic Peninsula and shores of Puget Sound, northward to southwestern British Columbia (Huntingdon\*) to Howe Sound, and near the summit of Coast Mountains at Alta Lake, 70 miles north of Vancouver. (B.C.)

Genus *Mephitis* Geoffroy and Cuvier.<sup>2</sup> Striped Skunks

1795. *Mephitis* Geoffroy and Cuvier, Mag. Encyclop., 1re année, vol. 2, p. 187. Type, *Viverra mephitis* Schreber.

Subgenus *Mephitis* Geoffroy and Cuvier

\****Mephitis mephitis mephitis*** (Schreber). NORTHEASTERN STRIPED SKUNK. *Mouffette du nord-est*.

1776. *Viverra mephitis* Schreber, Säugthiere, Pl. 121.  
 1901. *Chincha mephitis* Howell, North Amer. Fauna, No. 20, p. 22 (Aug. 31, 1901).  
 1902. *Mephitis mephitis* Allen and others, Science, n.s., vol. 16, p. 115 (July 18, 1902).  
 1936. *Mephitis mephitis mephitis* Hall, Contr. Palaeontology, IV, Carnegie Inst. Wash., Publ. No. 473, p. 64 (Nov. 20, 1936).

*Type Locality.* Eastern Canada.

*Range.* Eastern Canada—Nova Scotia, New Brunswick, Quebec, and Northern Ontario; ranging north to James Bay and found occasionally on north shore of Gulf of St. Lawrence, west at least to Oxford House in central Manitoba. (Man., N.B., N.S., P.E.I., P.Q.)

<sup>1</sup>Revised by Howell, Revision of the Skunks of the genus *Spilogale*; North Amer. Fauna, No. 26, pp. 55, pls. 10 (Nov. 24, 1906).

<sup>2</sup>Revised, under the name *Chincha*, by Howell, North Amer. Fauna, No. 20, Aug. 31, 1901. For discussion of the nomenclature of this genus see Howell, North Amer. Fauna, No. 20, p. 14 (Aug. 31, 1901); Proc. Biol. Soc. Wash., vol. 15, pp. 1-9 (Feb. 18, 1902); North Amer. Fauna, No. 26, pp. 10-11 (Nov. 24, 1906); Allen, Bull. Amer. Mus. Nat. Hist., vol. 14, pp. 325-334; Proc. Biol. Soc. Wash., vol. 15, pp. 59-66 (Mar. 22, 1902); Allen and others, Science, n.s., vol. 16, pp. 114-115 (July 18, 1902); Hall, Mustelid Mammals from the Pleistocene of North America with Systematic Notes on Some Recent Members of the genera *Mustela*, *Taxidea*, and *Mephitis*, Contr. to Palaeontology, IV, Carnegie Inst. Wash., Publ. 473, pp. 41-119 (Nov. 20, 1936).



\***Mephitis mephitis hudsonica** (Richardson). NORTHERN PLAINS SKUNK. *Mouffette du Nord*.

1829. *Mephitis americana* var. *hudsonica* Richardson, Fauna Boreali-Americana, vol. 1, p. 65.  
 1895. *Mephitis mephitis* Bangs, Proc. Boston Soc. Nat. Hist., vol. 26, p. 536 (July 31, 1895).  
 1901. *Chincha hudsonica* Howell, North Amer. Fauna, No. 20, p. 24 (Aug. 31, 1901).  
 1911. *Mephitis minnesota* Brass, Aus dem Reiche der Pelze, p. 532 (April 1911). Forested region of Minnesota.  
 1936. *Mephitis mephitis hudsonica* Hall, Contr. Palæontology, IV, Carnegie Inst. Wash., Publ. 473, p. 65 (Nov. 20, 1936).

*Type Locality.* Plains of the Saskatchewan, Canada. (No type designated.)

*Range.* Western Canada from central Manitoba to British Columbia, through the Cascades where it intergrades with *M. m. spissigrada* (Hall, p. 64); north in British Columbia to vicinity of Tuchodi Lake and junction of Liard and Nelson Rivers (Rand, 1944, p. 39); north in Mackenzie district, Northwest Territories, as far as Simpson; south in the United States to Nebraska and northern New Mexico. (Alta., B.C., Man., N.W.T., Sask.)

\***Mephitis mephitis nigra** (Peale and Beauvois). EASTERN STRIPED SKUNK. *Mouffette de l'Est*.

1796. *Viverra nigra* Peale and Beauvois, Catal. Peale's Mus., Phila., p. 37.  
 1842. *Mephitis putida* Boitard, Jardin des Plantes, Mamm., p. 147 (1842).  
 1885. *Mephitis mephitis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885). (Part.)  
 1901. *Chincha putida* Howell, North Amer. Fauna, No. 20, p. 25 (Aug. 31, 1901).  
 1911. *Mephitis dentata* Brass, Aus dem Reiche der Pelze, p. 533 (April 1911). From the Alleghenies to Connecticut.  
 1921. *Mephitis mephitis nigra* Howell, North Amer. Fauna, No. 45, p. 39 (Oct. 29, 1921).

*Type Locality.* Maryland.

*Range.* New England, and Middle Atlantic States; north to southern Ontario at least as far as Toronto region (Snyder and Logier, 1930, Contr. Royal Ont. Mus. Zool., No. 3, p. 176); southern Quebec along the northern boundaries of New York, Vermont, New Hampshire, and Maine; probably also western New Brunswick; south to northern Virginia, and west of Allegheny Mountains from lower peninsula of Michigan and southern Illinois to central Alabama and Mississippi. (Ont., P.Q.)

\***Mephitis mephitis spissigrada** Bangs. PUGET SOUND STRIPED SKUNK. *Mouffette du passage Puget*.

1898. *Mephitis spissigrada* Bangs, Proc. Biol. Soc. Wash., vol. 12, p. 31 (March 24, 1898).  
 1899. *Mephitis foetulenta* Elliot, Field Columb. Mus., Publ. 32, zool. ser., vol. 1, p. 269 (March 1899). Lagune, near Port Angeles, Clallam county, Washington.  
 1901. *Chincha occidentalis spissigrada* Howell, North Amer. Fauna, No. 20, p. 35 (Aug. 31, 1901).  
 1936. *Mephitis mephitis spissigrada* Hall, Contr. Palæontology, IV, Carnegie Inst. Wash., Publ. No. 473, p. 67 (Nov. 20, 1936).

*Type Locality.* Sumas, British Columbia.

*Range.* Pacific coast region from northwestern Oregon, Washington, and southwestern British Columbia (Huntingdon\*) south of Fraser River. (B.C.)

### Subfamily 'Taxidiinae. American Badgers<sup>1</sup>

#### Genus *Taxidea* Waterhouse

1839. *Taxidea* Waterhouse, Proc. Zool. Soc. London, 1838, p. 153 (May 1839). Type, *Meles labradorius* Gmelin=*Ursus taxus* Schreber.

\***Taxidea taxus taxus** (Schreber). AMERICAN BADGER. SILVER BADGER. *Blaireau d'Amérique*.

1778. *Ursus taxus* Schreber, Säugthiere, vol. 3, p. 520.  
 1885. *Taxidea americana americana* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 609 (1885).  
 1894. *Taxidea taxus* Rhoads, Amer. Nat., vol. 28, p. 524 (June 1894).

*Type Locality.* Labrador and Hudson Bay. (There are no authentic records of badger from Labrador or the province of Quebec, or from any region

<sup>1</sup>Revised by E. Raymond Hall, Mustelid Mammals from the Pleistocene of North America with Systematic Notes on some Recent members of the genera *Mustela*, *Taxidea*, and *Mephitis*; Contr. Palæontology, IV, Carnegie Inst. Wash. Publ. No. 473, pp. 41-119 (Nov. 20, 1936); genus *Taxidea*, pp. 77-83.



within hundreds of miles of Hudson Bay, and many old "types" from Hudson Bay region are considered to have merely been brought out from Hudson Bay ports in trade from districts farther south and west. The type of *T. t. taxus* was probably taken some distance southwest of Hudson Bay.)

*Range.* In Canada there are a few old records from southern Ontario and the badger is occasionally taken in the Rainy River district of extreme western Ontario; fairly well distributed in Great Plains region of Manitoba, Saskatchewan, and Alberta to foothills of the Rocky Mountains. In the United States ranges from northern Indiana, northern Illinois, Wisconsin, Iowa, and Minnesota, and southwest to northern New Mexico. (Alta., Man., Ont., Sask.)

\***Taxidea taxus neglecta** (Mearns). CALIFORNIA BADGER. YELLOW BADGER. *Blaireau de Californie*. *Blaireau jaune*.

1891. *Taxidea americana neglecta* Mearns, Bull. Amer. Mus. Nat. Hist., vol. 3, p. 250 (June 5, 1891).

1901. *Taxidea taxus neglecta* Miller and Rehn, Proc. Boston Soc. Nat. Hist., vol. 30, p. 218 (Dec. 27, 1901).

*Type Locality.* Fort Crook, Shasta county, California. (Type: U.S.N.M., No. 3835/4191.)

*Range.* From Lower California, southwestern California, and across the central and northeastern part of the state, through eastern Oregon and western Washington north into some of the dry valleys in the southern interior of British Columbia. The National Museum of Canada has specimens taken in 1929 on Meadow Creek, near Yahk\*, a few miles north of the Idaho-Montana corner, and from Tobacco Plains, east of Newgate\*, near the northwestern Montana boundary, in 1930. Dr. Ian McTaggart Cowan in 1928 took one specimen near Kamloops, the most westerly Canadian record, and examined another specimen from Blackpines, about 20 miles northeast of Kamloops, the most northerly record of *neglecta*. (B.C.)

Family FELIDAE. Cats

Genus *Felis* Linnaeus<sup>1</sup>

1758. *Felis* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 41. Type by tautonymy, *Felis catus* Linnaeus.

*concolor* group (=the genus *Puma* of Pocock). Pumas or Cougars

\***Felis concolor cougar** Kerr. EASTERN COUGAR. PUMA. PANTHER. *Panthère d'Amérique est.*

1792. *Felis cougar* Kerr, Anim. Kingd., p. 151.

1885. *Felis concolor* True, Proc. U.S. Nat. Mus., vol. 7 (1884), (1885). (Part.)

1929. *Felis concolor cougar* Nelson and Goldman, Journ. Mamm., 10:4, p. 347.

*Type Locality.* Pennsylvania.

*Range.* Formerly common in northeastern United States west to Wisconsin and Minnesota, and in southern Ontario and Quebec. Now extinct; no records from Ontario and Quebec later than 1847; Seton (1929) gives reports of several cougars killed in western Manitoba, the latest in 1904, but no specimens were examined and may belong to one of the Western races of cougar, probably *missoulensis*. (Ont., P.Q.)

<sup>1</sup>Revised by Nelson and Goldman, List of the Pumas with 3 described as new, Journ. Mamm., 10:4, pp. 345-350 (Nov. 11, 1929). Goldman, 2 races of the Puma, Jour. Mamm., 24:2, pp. 228-231 (June 8, 1943).



**\*Felis concolor missoulensis** Goldman. NORTHERN ROCKY MOUNTAIN COUGAR. *Cougouar des Rocheuses du nord*.

1897. *Felis oregonensis hipolestes* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 219 (July 15, 1897). Type Locality, Wind River Mountains, Fremont county, Wyoming. (U.S.N.M., No. 57936.) (In part; Canadian records of this form now referred to *F. c. missoulensis*.)  
1943. *Felis concolor missoulensis* Goldman, Journ. Mamm., 24:2, p. 229 (June 8, 1943).

*Type Locality.* Sleeman Creek, about 10 miles southwest of Missoula, Missoula county, Montana. (Type: U.S.N.M., No. 262116.)

*Range.* Northern Rocky Mountain region from Yellowstone National Park, Wyoming, regularly north to Jasper Park\*, Alberta, and occasional stragglers to the Peace River district, and rarely to Liard River in northeastern British Columbia; east formerly to western Saskatchewan and northwestern North Dakota. On the south, in northern Wyoming, *missoulensis* passes rather abruptly into *hipolestes*, which differs most obviously in the relatively narrower, more elongated skull. Between the Rocky Mountains and the Cascade Range *missoulensis* intergrades with *oregonensis*. (Alta., B.C., Sask.)

**\*Felis concolor oregonensis** Rafinesque. NORTHWESTERN COUGAR. *Cougouar du nord-ouest*.

1832. *Felis* [sic] *oregonensis* Rafinesque, Atlantic Journ., vol. 1, p. 62.  
1897. *Felis hipolestes olympus* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 220 (July 15, 1897). Lake Cushman, Mason county, Washington.  
1899. *Felis oregonensis* Stone, Science, n.s., vol. 9, p. 35 (Jan. 6, 1899). (See for discussion of type locality.)  
1929. *Felis concolor oregonensis* Nelson and Goldman, Journ. Mamm., 10:4, p. 347.

*Type Locality.* Northwest coast of the United States.

*Range.* Coastal region and mountain slopes of Cascade and Coast ranges in western Oregon, Washington, and British Columbia, north at least to Bella Coola Inlet, British Columbia. Intergrading with *missoulensis* in interior of southern and central British Columbia between the Cascades and Rocky Mountain ranges. (B.C.)

**\*Felis concolor vancouverensis** Nelson and Goldman. VANCOUVER ISLAND MOUNTAIN LION. VANCOUVER ISLAND COUGAR. *Cougouar de l'île Vancouver*.

1932. *Felis concolor vancouverensis* Nelson and Goldman, Proc. Biol. Soc. Wash., vol. 45, pp. 105-108 (July 15, 1932).

*Type Locality.* Campbell Lake, Vancouver Island, British Columbia. (Type: U.S.N.M., No. 211519.)

*Range.* Known only from Vancouver Island. (B.C.)

### Genus *Lynx* Kerr. Lynxes

1792. *Lynx* Kerr, Anim. Kingd., vol. 1, systematic catalogue inserted between pages 32 and 33 (description p. 155). Type, *Lynx vulgaris* Kerr=*Felis lynx* Linnaeus.  
1867. *Cervaria* Gray, Proc. Zool. Soc. London, p. 276. (Not of Walker, 1866.) Type, *Felis pardina* Temminck=*Lynx pardellus* Miller.  
1903. *Eucervaria* Palmer, Science, n.s., vol. 17, p. 873 (May 29, 1903). (Substitute for *Cervaria* Gray.)

### *canadensis* group. Canada Lynxes

**\*Lynx canadensis canadensis** Kerr. CANADA LYNX. *Lynx du Canada*.

1792. *Lynx canadensis* Kerr, Anim. Kingd., vol. 1, systematic catalogue inserted between pages 32 and 33 (description, p. 157).  
1885. *Lynx borealis canadensis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 611 (1885).  
1900. *Lynx canadensis mollipilosus* Stone, Proc. Acad. Nat. Sci., p. 48 (March 24, 1900). Wainwright Inlet, Alaska. Described from very scanty material, and examination of a large number of specimens from Alaska to Ontario showed no consistent differences (Anderson, Ann. Rept. Nat. Mus. Canada (1927), 1929; pp. 98-99; also in Can. Field-Nat., 44:4, p. 99, 1930).

*Type Locality.* Eastern Canada.



**Range.** Originally found in most forested parts of Canada from Nova Scotia to British Columbia\* and Yukon\*, and frequently wandering to the Arctic coast of Alaska (Martin Point\* 1917), Yukon, and Northwest Territories (Mackenzie district, Franklin Bay\*, autumn 1917, shot on sea ice), as well as outside of its normal range during the maximum of the periodical fluctuations in numbers of the species. (Alta., B.C., Man., N.B., N.S., N.W.T., Ont., P.Q., Sask., Y.T.)

**Lynx subsolanus** Bangs. NEWFOUNDLAND LYNX. *Lynx de Terre-Neuve*.

1897. *Lynx subsolanus* Bangs, Proc. Biol. Soc. Wash., vol. 11, p. 49 (March 16, 1897).

**Type Locality.** Codroy, Newfoundland. (Type: M.C.Z., No. B1190.)

**Range.** Apparently restricted to island of Newfoundland. (Nfld.)

*rufus* group. Bay Lynxes; Bobcats

**\*Lynx gigas** Bangs. NOVA SCOTIA WILDCAT. *Chat sauvage de la Nouvelle-écosse*.

1897. *Lynx gigas* Bangs, Proc. Biol. Soc. Wash., vol. 11, p. 50 (March 16, 1897).

**Type Locality.** Fifteen miles back of Bear River, Nova Scotia, Canada. (Type: M.C.Z., No. B4951.)

**Range.** Nova Scotia and parts of eastern New Brunswick. No specimens are available from Cape Breton Island, but as "wildcats" are reported from there to be locally distinguishable from *Lynx canadensis* they are referred to *gigas*. Cape Breton Island is fairly large, but is separated from the mainland of Nova Scotia by the narrow Strait of Canso, and no insular species of mammals have yet been recognized from this island. (N.B., N.S.)

**\*Lynx rufus rufus** (Schreber). EASTERN WILDCAT. BAY LYNX. WILDCAT. BOBCAT. *Lynx bai*. *Chat sauvage*.

1777. *Felis rufa* Schreber, Säugthiere, Pl. 109b.

1817. *Lynx rufus* Rafinesque, American Monthly Magazine, vol. 2, p. 46 (Nov. 1817).

1885. *Lynx rufus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 611 (1885). (Part.)

**Type Locality.** New York. (Type not designated.)

**Range.** "Found in eastern United States from Maine to southern Georgia and west to North Dakota" (Anthony, 1928). Formerly common in parts of southern Ontario and Quebec, but now very rare. Isolated reports from Gaspé Peninsula make the occurrence of the wildcat probable in western New Brunswick, although New Brunswick records are confused with *L. gigas*. (N.B., Ont., P.Q.)

**Lynx rufus fasciatus** Rafinesque. BARRED BOBCAT. NORTHWESTERN BOBCAT. *Chat sauvage bande-croisée*.

1817. *Lynx fasciatus* Rafinesque, American Monthly Magazine, vol. 2, p. 46 (Nov. 1817).

1897. *Lynx fasciatus* Merriam, Mazama, vol. 1, p. 224 (Oct. 1897).

1924. *Lynx rufus fasciatus* Grinnell and Dixon, Univ. Calif. Publ. Zool., vol. 21, No. 13, pp. 348-9.

**Type Locality.** "Northwest coast"; probably near the mouth of the Columbia River. (Type not designated.)

**Range.** From the extreme northwestern humid coast district of California (Mendocino, Humboldt, and Del Norte counties), along coastal region of Oregon, Washington, and southwestern British Columbia. (B.C.)

**Lynx rufus pallescens** Merriam. PALLID BARRED BOBCAT. *Pâle chat sauvage*.

1899. *Lynx rufus pallescens* Merriam, North Amer. Fauna, No. 16, p. 104 (Oct. 28, 1900).

1902. *Lynx uinta* Merriam, Proc. Biol. Soc. Wash., vol. 15, p. 71 (March 22, 1902). Bridger Pass, Carbon county, Wyoming.

1924. *Lynx rufus pallescens* Grinnell, J., and Dixon, J. S., Revision of the genus *Lynx* in California; Univ. Calif. Publ. Zool., 21: pp. 339-354. (The type of *pallescens* is interpreted as intermediate between the Great Basin subspecies *uinta* and the Northwest Coast subspecies *fasciatus*, but as the characters of the type approach nearer to *uinta* they are considered synonymous, and by the law of priority *uinta* is placed in synonymy.)

**Type Locality.** South side of Mount Adams, near Trout Lake, Skamania county, Washington. (Type: U.S.N.M., No. 76585.)



*Range.* The Great Basin section of northeastern California, north through eastern Oregon, Washington into parts of southeastern British Columbia, and east through Nevada, Utah, Colorado, Wyoming, Idaho, and Montana into southern Alberta and southwestern Saskatchewan. (Alta., B.C., Sask.)

#### Suborder PINNIPEDIA

#### Family OTARIIDAE. Eared Seals

#### Genus *Zalophus* Gill

1866. *Zalophus* Gill, Comm. Essex Inst., vol. 5, p. 7. Type, *Otaria gillespii* McBain=*Otaria californiana* Lesson.

***Zalophus californianus*** (Lesson). CALIFORNIA SEA-LION. *Lion de mer de la Californie*.

1828. *Otaria californiana* Lesson, Dict. class. hist. nat., vol. 13, p. 420.

1880. *Zalophus californianus* Allen, Monogr. North Amer. Pinnipeds, p. 276.

*Type Locality.* California.

*Range.* Along Pacific coast from southern Mexico to northern California; casually to British Columbia. The only available Canadian record is a male skull in the B.C. Provincial Museum picked up at Clayoquot, west coast of Vancouver Island (Cowan, Can. Field-Nat., 50:9, pp. 146-7, 1936). (B.C.)

#### Genus *Eumetopias* Gill

1866. *Eumetopias* Gill, Comm. Essex Inst., vol. 5, p. 7. Type, *Arctocephalus monteriensis* Gray=*Phoca jubata* Schreber.

**\**Eumetopias jubata*** (Schreber). NORTHERN SEA-LION. STELLER'S SEA-LION. *Lion de mer du Nord*.

1776. *Phoca jubata* Schreber, Säugthiere, vol. 3, p. 300.

1885. *Eumetopias stelleri* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

1902. *Eumetopias jubata* Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, p. 113 (March 15, 1902).

*Type Locality.* North Pacific Ocean.

*Range.* Found from Bering Strait to Farallon Islands, California. (B.C.)

#### Genus *Callorhinus* Gray.<sup>1</sup> Northern Fur Seals

1859. *Callorhinus* Gray, Proc. Zool. Soc. London, p. 359. Type, *Phoca ursina* Linnaeus.

1892. *Callotaria* Palmer, Proc. Biol. Soc. Wash., vol. 7, p. 156 (July 27, 1892). (Substitute for *Callorhinus*, assumed to be a homonym of *Callirhinus* Blanchard, 1850. This is not in conformity with the provisions of the International Code, article 36, with accompanying recommendations.)

**\**Callorhinus ursina cynocephala*** (Walbaum). ALASKA FUR SEAL. *Phoque à fourrure du Nord*.

1792. *Siren cynocephala* Walbaum, Artedi, Genera Pisc., p. 560.

1885. *Callorhinus ursinus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

1899. *Callorhinus alascanus* Jordan and Clark, The Fur Seals and Fur Seal Islands of the North Pacific Ocean, pt. 3, p. 2 (Nov. 1899).

1936. *Callotaria ursina cynocephala* Stejneger, in Georg Wilhelm Steller [biography], Harvard Univ. Press, p. 285. "As the fur-seal of the Alaskan herd is considered subspecifically distinct from the Kommander Islands herd, its systematic (?) may in reality be *Callotaria ursina cynocephala* and not *Callotaria alascanus*."

1940. *Callorhinus ursina cynocephala* Hall, California Fish and Game, 26 (1), p. 76 (January 1940).

*Type Locality.* Pribilof Islands, Alaska.

*Range.* Breeding on Pribilof Islands, Bering Sea, and not known to land at any other place. "Its migration carries it as far south as the latitude of

<sup>1</sup>For discussion of the various names proposed for this genus see Palmer, Proc. Biol. Soc. Wash., vol. 7, p. 156 (July 27, 1892); Proc. Biol. Soc. Wash., vol. 14, pp. 133-134 (Aug. 9, 1901); Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, pp. 115-118 (Mar. 15, 1902); Jordan and Clark, The Fur Seals and Fur Seal Islands of the North Pacific Ocean, pt. 3, p. 2 (Nov. 1899).



southern California, the females going farthest and the old bulls wintering mainly south of the Aleutians or in the Gulf of Alaska." (Preble, 1923, p. 109.) A few casual stragglers have been seen in the Arctic Ocean, and there is one authentic record of a specimen taken near Point Barrow, Alaska. Frequently taken in migration off coast of British Columbia. (B.C.)

### Family PHOCIDAE. Hair Seals<sup>1</sup>

#### Genus *Phoca* Linnaeus<sup>2</sup>

#### Subgenus *Phoca* Linnaeus. Harbour Seals

**\**Phoca vitulina concolor* (DeKay).** ATLANTIC HARBOUR SEAL. *Phoque commun de l'Atlantique*.

1842. *Phoca concolor* DeKay, Zool. of New York, pt. 1, Mamm., p. 53.

1885. *Phoca vitulina* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

1913. *Phoca vitulina concolor* Brown, Pocket List Mamm. Eastern Massachusetts, p. 30.

*Type Locality.* Long Island Sound, near Sands Point, Queens county, New York. (Type not known.)

*Range.* Atlantic coast of North America from North Carolina to Ellesmere Island, most abundant from Maine to Labrador, but rare or uncommon at the extremes of its range. Occasionally ascends the St. Lawrence River to Montreal; a few records of occurrence in Lake Ontario, and one record of specimen killed at mouth of Gatineau River near Ottawa in 1865. (N.B., N.S., N.W.T., P.E.I., P.Q., Labr., Nfld.)

***Phoca vitulina mellonae* Doult.<sup>3</sup>** UNGAVA FRESHWATER SEAL. *Phoque d'eau douce d'Ungava*.

1942. *Phoca vitulina mellonae* Doult, Annals Carnegie Museum, vol. 39, Art. 4, pp. 111-114 (Pittsburgh, Pa., May 12, 1942).

*Type Locality.* Lower Seal Lake, Quebec, about 90 miles east of Richmond Gulf, Hudson Bay, 56° 30' N. latitude, 74° 30' W. longitude. (Type: Carnegie Museum, No. 15215.)

*Range.* Restricted to Upper and Lower Seal Lakes, which lie about 90 miles east of Richmond Gulf, Hudson Bay, Quebec, Canada. (P.Q.)

**\**Phoca vitulina richardii* (Gray).<sup>4</sup>** PACIFIC HARBOUR SEAL. *Phoque commun du Pacifique*.

1864. *Halicyon richardii* Gray, Proc. Zool. Soc. London, p. 28.

1899. *Phoca largha* True, The Fur Seals and Fur Seal Islands of the North Pacific Ocean, pt. 3, p. 351 (Nov. 1899).

1902. *Phoca richardii* Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, p. 491 (Dec. 12, 1902).

1942. *Phoca vitulina richardii* Doult, Ann. Carnegie Mus., vol. 29, p. 112 (May 12, 1942).

*Type Locality.* Vancouver Island, British Columbia, Canada. (Type: Br. Mus.)

*Range.* American side of the North Pacific Ocean, from northern California to Bering Sea; occasionally in Arctic Ocean as far north as Point Barrow, Alaska, and east to Herschel Island, Yukon. (B.C., Y.T.)

<sup>1</sup>See Anderson, R.M., Two New Seals from Arctic Canada with Key to the Canadian forms of Hair Seals (Family Phocidae) and Deux nouveaux phoques de l'arctique Canadien et clef pour les formes canadiennes de phoques communs (Famille Phocidae), Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec (1942), pp. 23-34, 35-47 (Sept. 7, 1943).

<sup>2</sup>Revised by Doult, J.K., Review of the Genus *Phoca*, Annals Carnegie Museum, Pittsburgh, vol. 29, pp. 61-125 (1942).

<sup>3</sup>Named for Mrs. Mary Taylor Mellon and her husband, Mr. William Latimer Taylor, in recognition of timely aid to the Carnegie Museum expedition which secured the first specimens of this new form.

<sup>4</sup>Type specimens collected by Mr. Charles B. Wood, surgeon of H.M.S. *Hecate* and dedicated at his request to Capt. Richard, R.N., Hydrographer of the Admiralty and Capt. of H.M.S. *Hecate* when these seals were collected. The describer adds: "I have the more pleasure in doing this as the Museum has received many very interesting specimens collected during the voyage of the *Hecate* showing the interest which his Commander takes in the natural sciences, which I have no doubt will receive additional encouragement in the new position which he has won by his hydrographic and scientific qualifications."



Subgenus *Pusa* Scopoli

1777. *Pusa* Scopoli, Introd. Hist. Nat., p. 490. Type, *Phoca foetida* Fabricius=*Phoca hispida* Schreber.

\****Phoca hispida hispida*** Schreber. ARCTIC RINGED SEAL. *Phoque annelé*.

1775. *Phoca hispida* Schreber, Säugthiere, vol. 3, Pl. 86.

1885. *Phoca foetida* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

1898. *Phoca hispida* Thomas, The Zoologist, ser. 4, vol. 2, pp. 100, 102 (March 1898).

*Type Locality.* Coasts of Greenland and Labrador. (Type not known.)

*Range.* Mostly in Arctic seas, recorded as far north as 82° 40'; in all parts of the sea in Eastern American Arctic from Greenland south to Labrador and Hudson Bay; probably intergrading with *P. h. beaufortiana* in the central part of Canadian Arctic Archipelago. (N.W.T., districts of Franklin and Keewatin; P.Q., Labr.)

†\****Phoca hispida beaufortiana*** Anderson. BEAUFORT RINGED SEAL. *Phoque annelé de Beaufort*.

1943. *Phoca hispida beaufortiana* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec (1942), pp. 25-27, 37-39 (Sept. 7, 1943).

*Type Locality.* Cockburn Point, Dolphin and Union Strait, Mackenzie district, Northwest Territories, Canada, latitude 68° 55' 29" N., longitude about 115° 10' W. (Type: N.M.C., 2807.)

*Range.* Arctic coast of Alaska and Beaufort Sea, east to Coronation Gulf. For lack of specimens it is impossible to trace the range of subspecies of this species in central part of the Canadian Arctic Archipelago. (N.W.T., Y.T., Alaska.)

†\****Phoca hispida soperi*** Anderson.<sup>1</sup> NETTILLING RINGED SEAL. *Phoque annelé de Nettilling*.

1943. *Phoca hispida soperi* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec (1942), pp. 27-30, 39-43 (Sept. 7, 1943).

*Type Locality.* Near mouth of Takuirbing River, at eastern end of Nettilling Lake about 85 feet above sea-level, Baffin Island, district of Franklin, Northwest Territories, Canada, latitude 66° 16' N., longitude 74° 33' 36" W. (Type: N.M.C., No. 6016.)

*Range.* Restricted to Nettilling Lake in central Baffin Island and the east side of Foxe Basin near mouth of Koukdjuak River on west coast of Baffin Island. (N.W.T.)

Subgenus *Pagophilus* Gray

1844. *Pagophilus* Gray, Zoology of the *Erebus* and *Terror*, p. 3. Type, *Phoca groenlandica* Erxleben.

1904. *Pagophoca* Trouessart, Catal. Mamm. viv. foss., suppl., p. 287. (Substitute for *Pagophilus*, assumed to be a homonym of *Pagophila* Kaup, 1829.)

\****Phoca groenlandica*** Erxleben. GREENLAND SEAL. HARP SEAL. SADDLE-BACK. *Phoque du Groenland*.

1777. [*Phoca*] *groenlandica* Erxleben, Syst. Regni Anim., vol. 1, p. 588.

1885. *Phoca groenlandica* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

*Type Locality.* Greenland and Newfoundland.

*Range.* North Atlantic and adjoining waters of Arctic Ocean on coasts of northern Europe and eastern North America; on American side from Greenland and southern Ellesmere Island south regularly to Hudson Bay. Labrador, Newfoundland, and Gulf of St. Lawrence; one record as far south as New Jersey; accidental in Western Arctic district (one caught in a fish-net at Aklavik, Mackenzie River delta in 1926, and another shot off north end of Melbourne Island, Queen Maud Gulf, about longitude 104° W. in 1941). (Man., N.B., N.S., Ont., P.E.I., P.Q.)

<sup>1</sup>Named for J. Dewey Soper, Chief Federal Migratory Bird Officer Prairie Provinces, National Parks Bureau, who collected the first scientific specimens of this seal while on an Arctic expedition for National Museum of Canada, 1924-26.



Genus *Erignathus* Gill. Bearded Seals

1866. *Erignathus* Gill, Comm. Essex Inst., vol. 5, p. 5. Type, *Phoca barbata* Erxleben.

\**Erignathus barbatus barbatus* (Erxleben). BEARDED SEAL. SQUARE-FLIPPER. *Phoque barbu*.

1777. [*Phoca*] *barbata* Erxleben, Syst. Regni Anim., vol. 1, p. 590.

1866. *Erignathus barbatus* Gill, Comm. Essex Inst., vol. 5, p. 12.

1904. *Erignathus barbatus nauticus* Osgood, North Amer. Fauna, No. 24, p. 47 (Nov. 23, 1904). (Okhotsk Sea.) Ranges eastward to the coast of Alaska (Miller, List North Amer. Recent Mamm., 1924, p. 165).<sup>1</sup> (In part.)

*Type Locality.* Coasts of Scotland, southern Greenland, and Iceland. (Type not known.)

*Range.* Arctic shores of northern Europe and North America from Greenland to Bering Sea, Hudson Bay and North Atlantic coast south to Labrador and rarely to Newfoundland. (N.W.T., Ont., P.Q., Labr., Nfld., Y.T.)

Genus *Halichoerus* Nilsson. Gray Seals

1820. *Halichoerus* Nilsson, Skand. Fauna, vol. 1, p. 376. Type, *Halichoerus griseus* Nilsson = *Phoca grypus* Fabricius.

\**Halichoerus grypus* (Fabricius). GRAY SEAL. HORSEHEAD SEAL. *Phoque gris. Tête de cheval*.

1791. *Phoca grypus* Fabricius, Skrivter af Naturhist.-Selskabet, Kjøbenhavn, vol. 1, pt. 2, p. 167, fig. 4.

1841. *Halichoerus grypus* Nilsson, Wiegmann's Arch. f. Naturg., VII, vol. 1, p. 318.

*Type Locality.* Greenland.

*Range.* North Atlantic, more common off islands of northeastern Europe; found rarely and locally on Atlantic coast from Greenland to Labrador, Newfoundland, Nova Scotia, and Gulf of St. Lawrence where it is most common off Anticosti and Mingan Islands on North Shore; reaches southern limit on small islands near Rimouski, Rivière-du-Loup county, on south side of estuary of St. Lawrence River. (N.S., P.Q., Labr., Nfld., Greenland.)

Genus *Cystophora* Nilsson. Hooded Seals

1820. *Cystophora* Nilsson, Skand. Fauna, vol. 1, p. 382. Type, *Cystophora borealis* Nilsson = *Phoca cristata* Erxleben.

1911. *Cystophoca* Brass, Aus dem Reiche der Pelze, p. 668. (Renaming, perhaps accidental, of *Cystophora*.)

\**Cystophora cristata* (Erxleben). HOODED SEAL. BLADDER-NOSE. CRESTED SEAL. *Phoque à capuchon*.

1777. [*Phoca*] *cristata* Erxleben, Syst. Regni Anim., vol. 1, p. 590.

1841. *Cystophora cristata* Nilsson, Wiegmann's Arch. f. Naturg., VII, vol. 1, p. 326.

*Type Locality.* Southern Greenland and Newfoundland. (Type not designated.)

*Range.* North Atlantic coast from Greenland to Labrador, Newfoundland, Nova Scotia, and Gulf of St. Lawrence; the most northerly record Cape Sabine, Ellesmere Island; whelping in the more southern latitudes on ice hummocks that may be approached from the open sea. The only records from Western Arctic are one killed at Herschel Island, Yukon, in early summer of 1931 and one killed near Tuktoyaktok just east of Mackenzie River delta in 1942-1943. (N.S., N.W.T., P.Q., Y.T., Labr., Nfld., Greenland.)

<sup>1</sup>Re-examination of specimens discussed by Osgood and comparison with much additional material from both east and west (Greenland, Arctic Canada, and Alaska) show that the alleged distinctions are based on juvenile characters in a few specimens and are not all constant (Anderson, Can. Field-Nat., 44:4, p. 99, 1930). The writer has not been able to examine any specimens of "nauticus" from Okhotsk Sea and the subspecific name of *nauticus* may be tenable for topotypes, but as far as North American records are concerned, he considers them referable to *E. b. barbatus*.



Genus *Mirounga* Gray. Sea-elephants

1826. *Macrorhinus* Geoffroy and Cuvier, Dict. des sci. nat., vol. 39, p. 552. Type, *Phoca Proboscidea* Péron = *P. leonina* Linnaeus. (Not of Latreille, 1825.)  
 1827. *Mirounga* Gray, Griffith's Cuvier, Anim. Kingd., vol. 5, p. 179. Type, *Phoca proboscidea* Péron.

***Mirounga angustirostris* (Gill).** NORTHERN ELEPHANT SEAL. *Phoque à trompe*.

1866. *Macrorhinus angustirostris* Gill, Proc. Chicago Acad. Sci., vol. 1, p. 33.  
 1904. [*Mirounga*] *angustirostris* Elliot, Field Columb. Mus. publ. 95, zool. ser., vol. 4, pt. 2, p. 545.  
 1946. *Mirounga angustirostris* Cowan and Carl, Can. Field-Nat., vol. 59, No. 5, Sept.-Oct., 1945, pp. 170-171, 1 pl. Feb., 1946.

*Type Locality.* St. Bartholomew's Bay, Lower California, Mexico.

*Range.* Formerly abundant on the coast and outlying islands from Point Reyes, north of San Francisco, south along coast of Lower California, but of recent years known only to breed on Guadalupe Island, off Lower California (Nelson, 1916, The Larger North Amer. Mammals, Natl. Geogr. Mag., 30 (5), pp. 432-433). The most northerly record is of a specimen that drifted ashore at Kaasan, Prince of Wales Island, Alaska, in 1940 (Willett, 1943, Journ. Mamm., 24 (4), p. 500). Recent data gathered by Ian McTaggart Cowan and G. Clifford Carl indicate that the elephant seal leads a pelagic existence in waters off the Washington and British Columbia coasts, its status as a Canadian visitant being established by a large male shot near Pine Island, Queen Charlotte Strait, September 22, 1944, a photograph of the dead animal being obtained and the skull destined for the Provincial Museum. (B.C.)

The male elephant seal reaches a length of from 18 to 22 feet, and has a broad flexible snout, which when relaxed hangs 6 to 8 inches below the muzzle, but can be moved about and raised vertically. The female is about half the size of the male. (B.C.)

## Family ODOBENIDAE. Walruses

Genus *Odobenus* Brisson

1762. *Odobenus* Brisson, Regn. Anim., ed. 2, p. 30. Type, *Odobenus* Brisson = *Phoca rosmarus* Linnaeus.

**\**Odobenus rosmarus* (Linnaeus).** ATLANTIC WALRUS. *Morse de l'Atlantique*. *Veau marin*.

1758. (*Phoca*) *rosmarus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 38.  
 1859. (*Odobaeus*) *rosmarus* Sundevall, Ofver. k. vet. akad. forh., Stockholm, 1859, p. 446.  
 1924. *Odobenus rosmarus* Miller, List North Amer. Recent Mamm., 1923, p. 167 (1924).

*Type Locality.* Arctic regions.

*Range.* North Atlantic and Arctic Oceans within historic times as far south as Gulf of St. Lawrence to Magdalen Islands; now seldom if ever appearing south of Hudson Bay and Hudson Strait; north to northwest Greenland and Ellesmere Island; rare or casual west of Barrow Strait, Somerset Island, and Fury and Hecla Strait. (Man., N.W.T., P.Q.)

***Odobenus divergens* (Illiger).** PACIFIC WALRUS. *Morse du Pacifique*.

1815. ? *Trichechus obesus* Illiger, Abhandl. k. Akad. Wissensch. Berlin, 1804-1811, p. 64 (nomen nudum).  
 1815. (*Trichechus*) *divergens* Illiger, Abhandl. k. Akad. Wissensch. Berlin, 1804-1811, p. 68.  
 1885. *Odobaeus obesus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 608 (1885).  
 1914. *Odobenus divergens* Stejneger, Proc. Biol. Soc. Wash., vol. 27, p. 145 (July 10, 1914).

*Type Locality.* About 35 miles south of Icy Cape, Alaska.

*Range.* Bering Sea north into Arctic Ocean, coasts of northeastern Siberia and northwestern Alaska, commonly north to Point Barrow; a few casual records on the north coast of Alaska; one from Herschel Island, Yukon, and one reported



by Eskimos stranded in Dolphin and Union Strait prior to 1914. Recent (1942) reports from western Eskimos colonized on west coast of Banks Island state that walrus are taken now and then on Herschel Island and on west coast of Banks Island; probably referable to the Pacific form, although there is a possibility that eastern walrus may occasionally work around the north of the Arctic Archipelago. (N.W.T., Y.T.)

### Order Cetacea.<sup>1</sup> Whales and Porpoises

#### Suborder ODONTOCETI. Toothed Cetaceans

#### Family PHYSETERIDAE. Sperm Whales

#### Genus *Physeter* Linnaeus

1758. *Physeter* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 76. Type, *Physeter catodon* Linnaeus.

***Physeter catodon* Linnaeus.** SPERM WHALE. CACHALOT. *Cachalot à grosse tête.*

1758. [*Physeter*] *catodon* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 76.

1885. *Physeter macrocephalus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).

1911. *Physeter catodon* Thomas, Proc. Zool. Soc. London, p. 157 (March 1911).

*Type Locality.* Kairston, Orkney Islands (Thomas).

*Range.* "Females and calves are found the year round in tropical waters, but old males in summer travel to or beyond the latitude of the South Shetland Islands of Antarctica on the south and Iceland and the Bering Sea on the north" (Kellogg, 1940, op. cit., p. 40).

H. F. S. Paisley (op. cit., MSS. memo., 1945) states that off the British Columbia coast "In the 11-year period 1933-1943 the annual catch ranged from a high of 378 whales in 1936 to a low of 91 in 1943. The number of Sperms ranged between 311 and 69, the latter number in 1943 and the former in 1936. However, some earlier records indicate that Finbacks were at one time taken in the greatest numbers. In 1923, for instance, there were 166 Fins in the total catch of 455. Sperms, Humpbacks and Sulphurs came next in order of numbers in that year, but the kill also included 53 Seis and 2 Bottlenoses. Apparently Right whales and Gray whales were occasionally taken in other days but in late years Sperms, Fins and Humps, and the occasional Sulphur, have made up the catch. The British Columbia whaling is done from the Queen Charlotte Islands. There were no operations in 1944." (B.C.)

Eastern records: Newfoundland (Hentschel, E., Zool. Anz., vol. 36, pp. 65-69, Leipzig (1910)); Nova Scotia (Piers, H., Proc. Nova Scotian Inst. Sci., vol. 15, pp. 95-114, Halifax (1923)). (B.C., Nfld., N.S.)

#### Family KOGIIDAE. Pygmy Sperm Whales

#### Genus *Kogia* Gray

1846. *Kogia* Gray, Zool. Voy. H.M.S. Erebus and Terror, vol. 1, Mamm., p. 22. Type, *Physeter breviceps* Blainville.

This species of this genus are all small whales, 9 to 13 feet in length; dorsal fin falcate; snout short, and blow-hole at forehead; mainly in Southern Hemisphere, but specimens have been taken in both North Atlantic and North Pacific Oceans.

<sup>1</sup>For classification of the supergeneric groups See Miller, Smiths. Misc. Coll., vol. 76, No. 5 (Aug. 31, 1923). Another important paper on this subject is Winge's "Udsigt over Hvalernes indbyrdes Slægtskab," Vidensk. Meddel. fra Dansk naturhist. Foren., vol. 70, pp. 59-142 (1918); translation by Miller under title: "A review of the interrelationships of the Cetacea," Smiths. Misc. Coll., vol. 72, No. 8, pp. 1-97 (July 30, 1921). See also Gray, Catalogue of seals and whales in the British Museum, 2nd ed., pp. 1-402, illustr., London (1866); Seammon, The marine mammals of the northwestern coast of North America, pp. 1-319, illustr., San Francisco (1874); Beddard, A book of whales, 1-320, figs. 40, pls. 21, London (1900). For a modern popular account see Kellogg, Whales, giants of the sea, Nat. Geogr. Mag., Washington, vol. 77, No. 1, pp. 35-90, 31 coloured plates, 26 photos (Jan. 1940).

Thanks are due to H. F. S. Paisley, Department of Fisheries, Ottawa, for notes from departmental records on eight species of the larger whales taken from 1933 to 1943 off the Queen Charlotte Islands, British Columbia, the only Canadian waters where commercial whale-catching has been carried on for a number of years. No whaling was carried on from Canadian bases in 1944.

A resumption of whaling from Canadian bases was stimulated by post-war conditions and operations in the Antarctic and other regions were projected for 1946.



**Kogia breviceps** (Blainville). PYGMY SPERM WHALE. *Cachalot pygmé*.

1838. *Physeter breviceps* Blainville, Ann. d'Anat. et de Physiol., vol. 2, p. 337.  
 1846. *Kogia breviceps* Gray, Zool. Voy. H.M.S. *Erebus* and *Terror*, vol. 1, Mamm., p. 22.  
 1871. *Kogia floweri* Gill, Amer. Nat., vol. 4, p. 738 (Feb. 1871). Off Mazatlan, Sinaloa, Mexico.  
 1885. *Kogia breviceps* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).  
 1923. *Kogia breviceps* Piers, Accidental Occurrence of the Pygmy Sperm Whale (*Kogia breviceps*) on the Coast of Nova Scotia: An Extension of its Known Range; with Remarks on the Probability of the Former Presence in These Waters of the True Sperm Whale (*Physeter macrocephalus*), Proc. and Trans. Nova Scotian Inst. Sci., Halifax, vol. 15, pp. 95-114, figs. 8. A female found dead under the ice in Herring Cove, outer part of Halifax Harbour, Jan. 17, 1920; skull preserved in N.S. Inst. Sci., Halifax. Listed by Allen (1941, p. 21) as the 19th specimen recorded from Atlantic Ocean.  
 1941. *Kogia breviceps* G. M. Allen, Pygmy Sperm Whale in the Atlantic, in Papers on mammalogy, publ. in honour of W. H. Osgood, Zool. Ser. Field Mus. Nat. Hist., vol. 27, pp. 17-36, figs. 4, Chicago (Dec. 8, 1941). Twenty-six records listed, 3 from South Africa, 2 from France, and 1 from Netherlands, 19 from east coast of United States (Florida, South Carolina, North Carolina, Virginia, New Jersey, New York, Massachusetts, and 1 from Nova Scotia). In the western Pacific there are many records, whereas for the eastern Pacific there are only two, one each for Lower California and Peru.

*Type Locality.* Region of the Cape of Good Hope, South Africa.

*Range.* Atlantic Ocean from Cape of Good Hope, South Africa, north to coast of France and Netherlands, and in the western Atlantic north to Nova Scotia; Pacific Ocean from New Zealand and Australia, north to Japan and Lower California. (N.S.)

Family DELPHINIDAE.<sup>1</sup> Porpoises

## Subfamily Delphininae

Genus *Stenella* Gray

1866. *Stenella* Gray, Proc. Zool. Soc. London for 1866, pt. 2, p. 213 (Sept. 1866). Type, *Steno attenuatus* Gray.  
 1880. *Prodelphinus* Gervais, in Van Beneden and Gervais, Osteogr. des Cetaces, p. 604. Type, *Delphinus marginatus* Duvernoy.

**Stenella euphrosyne** (Gray). NORTH ATLANTIC DOLPHIN. *Dauphin de Gray*.

1846. *Delphinus euphrosyne* Gray, Zool. Voy. H.M.S. *Erebus* and *Terror*, vol. 1, Mamm., p. 40.  
 1885. *Prodelphinus euphrosyne* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

*Type Locality.* Unknown.

*Range.* Atlantic Ocean; South Greenland; Shetland and Orkney Islands; Dieppe; mouth of Orb River; ? Mediterranean; Jamaica. Recorded from Woods Hole, Massachusetts. (Greenland.)

Genus *Delphinus* Linnaeus. Common Dolphin

1758. *Delphinus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 77. Type, *Delphinus delphis* Linnaeus.

**Delphinus delphis** Linnaeus. COMMON DOLPHIN. *Dauphin commun*.

1758. [*Delphinus*] *delphis* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 77.  
 1885. *Delphinus bairdii*, *D. delphis*, and *D. janira* True, Proc. U.S. Nat. Mus., vol. 7 (1884), pp. 588-589 (1885). (In part.) Miller (1936, p. 146) recognizes *D. bairdii* as separable from the Atlantic species.  
 1924. *Delphinus delphis* Miller, List North Amer. Recent Mamm., 1923, U.S.N.M., Bull. 128, p. 509 (Dec. 31, 1924).

*Type Locality.* European seas.

*Range.* Pelagic. Northern waters. Of casual occurrence in waters off the Maritime Provinces. The writer has seen one specimen in the Provincial

<sup>1</sup>Revised by True, under the name *Prodelphinus*. A Review of the Family Delphinidae; Bull. U.S. Nat. Mus., No. 36 (1889).



Museum, Halifax, taken about 1888, and one skull from the Literary and Historical Society of Quebec. H. F. Lewis of the National Parks Bureau obtained a detailed description of a specimen that was evidently this species, shot in a sheltered tidal passage near the mouth of Coxipi River, a small river east of St. Augustin River, Saguenay county, Quebec. (N.S., P.Q.)

### Genus *Lagenorhynchus* Gray

1846. *Lagenorhynchus* Gray, Ann. and Mag. Nat. Hist., vol. 17, p. 84 (Feb. 1846). Type, *Lagenorhynchus albirostris* Gray.

***Lagenorhynchus acutus* (Gray).** WHITE-SIDED DOLPHIN. *Marsouin à gros nez.*

1828. *Delphinus* [Grampus] *acutus* Gray, Spicil. Zool., pt. 1, p. 2.  
1846. *Lagenorhynchus acutus* Gray, Zool. Voy. H.M.S. *Erebus* and *Terror*, vol. 1, Mamm., p. 36.  
1885. *Lagenorhynchus acutus*, *L. gubernator*, and *L. perspicillatus*, True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

*Type Locality.* Unknown.

*Range.* North Atlantic Ocean, North Sea, Faroe Islands, Greenland, coast of the United States, Cape Cod. Presumably skirts the coasts of Nova Scotia, Newfoundland, and Labrador, between Cape Cod (Massachusetts) and South Greenland, but no definite records available from Canadian waters. (Greenland.)

***Lagenorhynchus albirostris* Gray.** WHITE-BEAKED DOLPHIN. *Marsouin à nez blanc.*  
*Dauphin à museau blanc.*

1846. *Lagenorhynchus albirostris* Gray, Ann. and Mag. Nat. Hist., vol. 17, p. 84 (Feb. 1846).  
1885. *Lagenorhynchus albirostris* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

*Type Locality.* Great Yarmouth, England.

*Range.* North Atlantic Ocean; Baltic Sea, Kiel; North Sea; Irish Channel; Faeroe Islands; Greenland; Davis Strait. (Greenland, N.W.T.)

### Genus *Grampus*<sup>1</sup> Gray

1828. *Grampus* Gray, Spicil. Zool., pt. 1, p. 2. Genotype, *Delphinus grampus* "Linn." = John Hunter, 1787 (= *Delphinus orca* Linnaeus).  
1860. *Orcinus* Fitzinger, Wiss.-Pop. Naturgesch. der Säugethiere, vol. 6, p. 204. Type, *Delphinus orca* Linnaeus.

***Grampus orca* (Linnaeus).** ATLANTIC KILLER WHALE. ATLANTIC KILLER. *Epaulard.* *Orque.*

1758. [*Delphinus*] *orca* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 77.  
1860. *Orcinus orca* Fitzinger, Wiss.-Pop. Naturgesch. der Säugethiere, vol. 6, p. 204.  
1885. *Orca gladiator*, *O. atra*, and *O. pacifica* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).  
1899. *Orcinus orca* Palmer, Proc. Biol. Soc. Wash., vol. 13, p. 24 (Jan. 31, 1899).  
1933. *Grampus orca* Iredale and Troughton, Records Australian Museum, vol. 19, No. 1, p. 28 (Aug. 2, 1933).

*Type Locality.* European seas.

*Range.* Cosmopolitan. "Killer whales are found in all oceans and seas, tropical and polar alike, from Novaya Zemlya, Baffin Bay, and Bering Strait to beyond the Antarctic Circle in the Southern Hemisphere" (Kellogg, R., 1940, op. cit., p. 71). P. Freuchen, in Rept. 5th Thule Exped., Mammals, by Degerbøl and Freuchen, part 2, pp. 262-266 (1935), states that this species is not known to occur in Hudson Bay, but was common in Eclipse Sound north of Baffin Island, and increasing in Davis Strait and Baffin Bay. (Greenland, Labr., Nfld., and probably also coasts of Nova Scotia and Quebec, where sight records are common.)

<sup>1</sup>See Iredale and Troughton, "The correct generic name for the Grampus or Killer Whale, and the so-called Grampus or Risso's Dolphin"; records of the Australian Museum, vol. 19, No. 1, Sydney, pp. 28-36, Pl. X (Aug. 2, 1933).



**Grampus rectipinna** (Cope). PACIFIC KILLER WHALE. PACIFIC KILLER. *Orque du Pacifique*.

1869. *Orca rectipinna* Cope, Proc. Acad. Nat. Sci. Phila., p. 22.  
 1898. [*Orca*] *rectispina* Trouessart, Catal. Mamm., viv. foss., p. 1050. (Accidental renaming of *rectipinna*.)  
 1901. [*Orcinus*] *rectipinna* Elliot, Synops. Mamm. North Amer., p. 22 (March 1901).

*Type Locality.* Coast of California.

*Range.* "Found in the North Pacific Ocean, south to the coast of California" (Anthony, Field Book North Amer. Mammals, 1928, p. 569); characterized by "No large white spot back of eye." Lucas, F. A., The Fur Seals and Fur-Seal Islands of the North Pacific Ocean, pt. 3, pp. 92-93 (1899) states that this species is absent from the Pribilof Islands during the fur-seal breeding season. (B.C.)

Genus *Globicephala* Lesson

1828. *Globicephala* Lesson, Hist. Nat. Mamm. Ois. decouv. depuis 1788, vol. 1, p. 441. Type, *Delphinus destructor* Scoresby=*D. melas* Traill.

**Globicephala ventricosa** (Lacépède). BLACKFISH. PILOT WHALE. CA'ING WHALE. *Globicéphale*. *Epaulard à tête ronde*.

1804. *Delphinus ventricosus* Lacépède, Hist. Nat. Cétac., p. xliii, based on small *Grampus*, Hunter, 1787, Philos. Trans. London, vol. 77, pl. 5, fig. 2. River Thames, England.  
 1809. *Delphinus melas* Traill, Nicholson's Journal, vol. 22, p. 81 (Feb. 1809).  
 1885. *Globicephalus melas* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).  
 1898. *Globicephala melaena* Thomas, The Zoologist, ser. 4, vol. 2, p. 99 (March, 1898).  
 1933. *Globicephala ventricosa* Iredale and Troughton, Records Australian Museum, vol. 19, No. 1, p. 28 (Aug. 2, 1933).

*Type Locality.* Scapay Bay, Pomona, Orkney Islands, Scotland.

*Range.* "From southern Greenland, the Faeroe Islands, and the coast of Norway to the Cape of Good Hope and the Kerguelen Islands, and in the Pacific Ocean from Japan south to New Zealand and Tasmania and east to Peru" (Kellogg, 1940, op. cit., p. 69). Migrating in large schools which appear at irregular intervals along the Atlantic coast of the United States. Occasional reports of "blackfish" whales stranded on coasts and inlets of the Maritime Provinces. A. W. H. Needler (1937, Can. Field-Nat., vol. 45, No. 7, pp. 157-158, 1 halftone illustr., Oct. 1, 1937) records a school of 152 individuals stranded on coast of Prince Edward Island on tide flats of Percival "River", Aug. 29, 1930. Prof. George Préfontaine of the Dept. of Zoology, University of Montreal (Rapp. Ann. 1930, Soc. Provancher d'hist. nat. du Canada, 1931) records the capture of 19 individuals of *G. melaena* (= *G. ventricosa*) in the vicinity of Trois Pistoles, Rimouski county, Quebec, on the south side of the lower St. Lawrence River, during the year 1930; records cited by Beaugé, *ibid.*, 1942, p. 25. (P.E.I., P.Q., and undoubtedly in waters off shores of N.S., N.B., Labr., and Nfld.)

Genus *Phocoena* G. Cuvier. Harbour Porpoises

1816. *Phocoena* G. Cuvier, Le Règne Animal, Paris, vol. 1, p. 279 (published Dec., 1816, *fide* C. D. Sherburn, 1922, Index Animalium, sec. 2, pt. 1, 801-1850, A-Bail, p. xli). Genotype, *Delph[inus] phocoena* Linnaeus.  
 1817. *Phocaena* Desmarest, Nouv. Diet. d. Hist. Nat., ed. 2, vol. 9, p. 163. Type, *Delphinus phocoena* Linnaeus.

**Phocoena phocoena** (Linnaeus). HARBOUR PORPOISE. *Marsouin commun*. *Pourcil*.

1758. [*Delphinus*] *phocoena* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 77.  
 1885. *Phocaena communis*, *P. lineata*, and *P. vomerina* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885). (In part.)  
 1898. *Phocaena phocaena* Thomas, The Zoologist, ser. 4, vol. 2, p. 99 (March 1898).  
 1924. *Phocaena phocoena* Miller, List North Amer. Recent Mamm., 1923, Bull. U.S. Nat. Mus., No. 128, p. 513 (Dec. 3, 1924).  
 1945. *Phocoena phocoena* Kellogg, R., in MSS. (May 21, 1945).

*Type Locality.* Swedish seas. (See Thomas, Proc. Zool. Soc. London, 1911, p. 158.)



**Range.** North Atlantic Ocean north to Iceland and Davis Strait, and in White Sea in northern Europe; range south to Strait of Gibraltar and Cape May, New Jersey.

Porpoise hunting was an important occupation of the Micmac Indians of Nova Scotia on the Bay of Fundy up to the latter part of the 19th century (See Leighton, A. H., *The Twilight of the Indian Porpoise Hunters*, Natural History, Amer. Mus. Nat. Hist., New York, vol. 40, No. 1, pp. 410-416, 458, illustr. (June 1937)). (N.B., N.S., N.W.T., P.Q., Greenland, Labr., Nfld.)

**Phocoena vomerina** Gill. PACIFIC HARBOUR PORPOISE. *Marsouin commun du Pacifique*.

1865. *Phocaena vomerina* Gill, Proc. Acad. Nat. Sci. Phila., vol. 17, p. 178.

1924. *Phocaena phocoena* Miller, List North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. No. 128, p. 513 (Dec. 31, 1924).

1940. *P[hocaena] vomerina* Kellogg, Nat. Geogr. Mag., vol. 77, No. 1, p. 85.

1942. *Phocoena vomerina* Scheffer, The Murrelet, vol. 23, No. 2 (Aug. 14, 1942).

**Type Locality.** Puget Sound, Washington. (Type: U.S.N.M., No. 4149.)

**Range.** "Pacific coast of North America from the Pribilof Islands in Bering Sea southward to Banderas Bay, Mexico" (Kellogg, op. cit., p. 85). (B.C.)

#### Genus *Phocoenoides* Andrews

1911. *Phocoenoides* Andrews, Bull. Amer. Mus. Nat. Hist., vol. 30, p. 31 (May 16, 1911).  
Type, *Phocoenoides truei* Andrews.

**Phocoenoides dalli** (True). DALL'S PORPOISE. *Marsouin de Dall*.

1885. *Phocaena dalli* True, Proc. U.S. Nat. Mus., vol. 8, p. 95 (May 20, 1885).

1911. *P[hocoenoides] dalli* Andrews, Bull. Amer. Mus. Nat. Hist., vol. 30, p. 34 (May 16, 1911).

**Type Locality.** Strait west of Adakh Island, Aleutian Islands, Alaska. (Type: U.S.N.M., No. 21762.)

**Range.** North Pacific Ocean, from the Aleutian Islands to southern California.

One of the creatures most frequently noticed by passengers on steamships following the Inside Passage from Seattle, Washington, to Juneau, Alaska, is this black and white porpoise. Less frequently it is seen around Kodiak Island and the Aleutians. During June it has been sighted as far south as the Santa Barbara Channel off southern California (Kellogg, 1940, op. cit., p. 72). (B.C.)

#### Subfamily *Delphinapterinae*

Genus *Delphinapterus* Lacépède. White whales<sup>1</sup>

1804. *Delphinapterus* Lacépède, Hist. Nat. Cétacés, Tabl. Ordres, Genres et Espèces, p. xli.  
Type, *Delphinapterus beluga* Lacépède=*Delphinus leucas* Pallas.

**\*Delphinapterus leucas** (Pallas). WHITE WHALE. BELUGA. *Marsouin blanc*. *Béluga*.

1776. *Delphinus leucas* Pallas, Reise Russ. Reiches, vol. 3, p. 85, footnote.

1812. *D[elphinapterus] leucas* Cuvier, Ann. Mus. Hist. Nat. Paris, vol. 19, p. 13.

1885. *Delphinapterus catodon* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).

1889. *Delphinapterus leucas* True, Rev. Fam. Delphinidae, p. 146.

**Type Locality.** Mouth of Ob River, Siberia.

**Range.** Arctic and subarctic seas. In Europe straggling south to Firth of Forth, Scotland. In North American waters north to Greenland and Ellesmere Island (lat. 81° 35' N.), Lancaster Sound, Baffin Bay, Davis Strait, Foxe Basin, Hudson Strait, Hudson Bay, and south along the Labrador coast, regularly to north shore of Gulf of St. Lawrence; also recorded from Cape Cod, Massachusetts, and Atlantic City, New Jersey. Absent from a large area in the central part of the Canadian Arctic Archipelago, but occurs in small numbers in Coronation

<sup>1</sup>See Tremblay, J. L., and Lauzier, L., L'origine de la nappe d'eau froide dans l'estuaire du St-Laurent, Contrib. Inst. Zool. Univ. Montréal, No. 7 (Naturaliste Canadien, vol. 67, Nos. 10-11, pp. 130, figs. 29 (January 1940); and Vladikov, Vadim-D., Études sur Mammifères Aquatiques, III, Chasse, biologie et valeur économique du Marsouin Blanc ou Béluga (*Delphinapterus leucas*) du fleuve et du golfe Saint-Laurent, p. 194, figs. 57, Ministère des Pêcheries, Province de Québec, Québec (1944).



Gulf, and regularly in schools on both sides of the Mackenzie delta and following the coast of Yukon and northern Alaska to Point Barrow and south to Aleutian Islands.<sup>1</sup> Considering the widely ranging migratory habits of the white whales, it is unsafe to make assumptions of distribution of species from purely geographical grounds. *D. dorofeevi* may perhaps be the same as the white whale of western Alaska and which may range through Bering Strait northwestward along the Siberian coast, as well as along the northwest coast of Alaska with a continuous range into Canadian waters in Beaufort Sea and Coronation Gulf, but it is also possible that either *D. leucas* or *D. freimani* may have a continuous range along the Arctic coasts of Siberia, Alaska, Yukon, and Northwest Territories of Canada. (Man., N.W.T., P.Q., Y.T., Greenland, Labr., Nfld.)

### Subfamily Monodontinae

#### Genus *Monodon* Linnaeus. Narwhal

1758. *Monodon* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 75. Type, *Monodon monoceros* Linnaeus.

\****Monodon monoceros* Linnaeus. NARWHAL. Narval.**

1758. [*Monodon*] *monoceros* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 75.

1885. *Monodon monoceros* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).

*Type Locality.* Arctic seas.

*Range.* Arctic seas in both hemispheres. North in summer on east coast of Greenland, west coast of Greenland, and eastern coast of Ellesmere Island to Smith Sound, Buchanan Bay (Bache Peninsula\* about 79° N., skeleton female), Kane Basin, and Kennedy Channel to 81° 35' N. in migration; south in Baffin Bay, Davis Strait, Hudson Strait, and Atlantic coast of Labrador; common in Lancaster Sound and Eclipse Sound (Bylot Island) during migrations; west in eastern Canadian Arctic to Prince Regent Sound (east side of Somerset Island) and Boothia Peninsula, and in Foxe Basin between west coast of Baffin Island and Melville Peninsula; rare in northern parts of Hudson Bay. In western Arctic occurs rarely at Point Barrow, but there are no definite records from Beaufort Sea, Amundsen Gulf, or Coronation Gulf regions. (Greenland, Labr., N.W.T., P.Q.)

### Family ZIPHIIDAE.<sup>2</sup> Beaked whales

#### Genus *Mesoplodon* Gervais<sup>3</sup>

1850. *Mesoplodon* Gervais, Ann. Sci. Nat., Paris, ser. 3, Zool., vol. 14, p. 16. Type, *Delphinus sowerbiensis* Blainville=*Physeter bidens* Sowerby.

1922. *Paikea* Oliver, Proc. Zool. Soc. London, p. 574 (Sept. 1922). Type, *Berardius hectori* Gray.

***Mesoplodon densirostris* (Blainville). BLAINVILLE'S BEAKED WHALE. Cachalot à bec de Blainville.**

1817. *Delphinus densirostris* Blainville, Nouv. Diet. Nat. Hist., ed. 2, vol. 9, p. 178.

1877. *M[esoplodon] densirostris* Flower, Proc. Zool. Soc. London, p. 684.

<sup>1</sup>The North American white whales have generally been referred to *D. leucas*, but 1 new species, *D. dorofeevi* Barabash and Klumov (1935) has been described from Okhotsk Sea, eastern Siberia, and another species, *D. freimani* Klumov (1935) from White Sea, northwestern Siberia. Barabash (1937, Journ. Mamm., vol. 18, pp. 507-509) summarizes the cranial characters of these 3 forms from 39 skulls from the following localities: White Sea, 10; Gulf of Ob, 22; Okhotsk Sea, 7; Nova Zembla, 2; Spitzbergen, 1; Greenland, 1. He states: "In conclusion I should like to say that I have measured also 2 skulls from Nova Zembla, 1 from Spitzbergen and 1 from Greenland. All of them more or less approach *Delphinapterus leucas*. Unfortunately at present we lack sufficient material to determine the taxonomic status of the white whales occurring in those regions. Many of the published descriptions of white whales, as for instance those of Cope (1865, 1896 in Scammon), are inadequate for purposes of comparison. In addition, most of these names have been applied to white whales occurring along the Atlantic coast of North America. It is hoped that the method of analysis of *Delphinapterus* outlined above will serve as a basis for a more precise understanding of geographic differentiation of the white whale." See also Hypothetical List p. 196.

<sup>2</sup>Revised by True, F. A., Bull. U.S. Nat. Mus., No. 73, (Sept. 28, 1910). See also Ulmer, Frederick A., Jr., *Mesoplodon mirus* in New Jersey, with additional notes on the New Jersey *M. densirostris*, and a List and Key to the Ziphioid Whales of the Atlantic Coast of North America; Proc. Acad. Nat. Sci. Phila., pp. 107-122, Pls. 20, 21, figs. 5 (Sept. 11, 1941); and Raven, Henry C., On the Structure of *Mesoplodon densirostris*, a rare beaked whale; Bull. Amer. Mus. Nat. Hist., vol. 80, pp. 23-50, figs. 1-26, tables 6 (Sept. 1, 1942).

<sup>3</sup>Revised in part by Ulmer, F. A., Jr., Proc. Acad. Nat. Sci. Phila., pp. 107-122, figs. 5, Pls. 20, 21 (Sept. 11, 1941). See also Raven, H. C., Bull. Amer. Mus. Nat. Hist., vol. 80, pp. 23-50, figs. 26, tables 6 (Sept. 1, 1942).



1906. *Mesoplodon bidens* G. M. Allen, Amer. Nat., vol. 40, p. 357 (May 1906). (In part.)  
 1941. *Mesoplodon densirostris* Ulmer, Proc. Acad. Nat. Sci. Phila., vol. 93, pp. 118-119 (Sept. 11, 1941).  
 1942. *Mesoplodon densirostris* Raven, Bull. Amer. Mus. Nat. Hist., vol. 80, pp. 23-50 (Sept. 1, 1942).

*Type Locality.* Unknown.

*Range.* Indian Ocean, areas near Australia and South Africa. Four records on Atlantic coast of North America; Annisquam, Mass., Aug. 1898, skeleton in Mus. Boston Soc. Nat. Hist. (Hyatt, A., Proc. Boston Soc. Nat. Hist., vol. 29, p. 9, 1899); Corson's Inlet, New Jersey, June 1913, male skeleton in Acad. Nat. Sci. Phila. (Andrews, R. C., Proc. Acad. Sci. Nat. Phila., vol. 66, p. 437, 1914); Bogue Bank, near Beauford, N.C., Jan. 1923, rostral portion of skull in U.S. Nat. Mus., Washington; Peggy's Cove, about 30 miles south of Halifax, Nova Scotia, early in February 1940, specimen in Amer. Mus. Nat. Hist., New York, det. by H. C. Raven (McKenzie, R. A., Proc. Nova Scotian Inst. Sci., Halifax, vol. 20, 1939-40, pt. 2, p. 46, Oct. 17, 1940). (N.S.)

**Mesoplodon mirus** True. TRUE'S BEAKED WHALE. *Cachalot à bec de True.*

1913. *Mesoplodon mirum* True, Smiths. Misc. Coll., vol. 60, No. 25, p. 1 (March 14, 1913).  
 1937. *Mesoplodon mirus* Raven, Notes on the Taxonomy and Osteology of two species of *Mesoplodon*, Amer. Mus. Novitates, No. 905, pp. 1-30, figs. 15 (Jan. 14, 1937). Five records given: North Carolina (type); New York (Long Island, Rockaway Beach, 1934); Maine (Wells Beach, 1906); and Ireland (Galway Bay, 1899, and County Clare, 1917).  
 1939. *Mesoplodon mirus* G. M. Allen, Journ. Mamm., vol. 20, pp. 259-260 (1939). Specimen taken at South Gut, Ste. Annes Bay, Cape Breton Island, Nova Scotia; skull in M.C.Z., Cambridge, Mass.  
 1941. *Mesoplodon mirus* Ulmer, Proc. Acad. Nat. Sci. Phila., vol. 93, *Mesoplodon mirus* in New Jersey, with additional notes on the New Jersey *M. densirostris*, and a List and Key to the Ziphioid Whales of the Atlantic Coast of North America, Proc. Acad. Nat. Sci. Phila., vol. 93, pp. 107-122, figs. 3, pls. 2 (Sept. 11, 1941); gives additional records of specimens from Connecticut (Mason Island, off Mystic); New Jersey (Island Beach, below Seaside Park).

*Type Locality.* Beaufort Harbor, Carteret county, North Carolina. (Type: U.S.N.M., No. 175019.)

*Range.* North Atlantic Ocean; on North American coast from North Carolina north at least to Cape Breton Island, Nova Scotia. (N.S.)

#### Genus *Ziphius* G. Cuvier

1823. *Ziphius* G. Cuvier, Oss. Foss., ed. 2, vol. 5, p. 352 (ed. 3, p. 352). Type, *Ziphius cavirostris* G. Cuvier.

***Ziphius cavirostris*** G. Cuvier. CUVIER'S BEAKED WHALE. TWO-TOOTHED SPERM WHALE. *Ziphius de Cuvier.* *Cachalot à deux dents.*

1823. *Ziphius cavirostris* G. Cuvier, Oss. foss., ed. 2, vol. 5, p. 353 (ed. 3, p. 352).  
 1865. *Hyperodon* [sic] *semijunctus* Cope, Proc. Acad. Sci. Phila., p. 280, Charleston, South Carolina.  
 1883. *Ziphius grebnitzkii* Stejneger, Proc. U.S. Nat. Mus., vol. 6, p. 77 (Bering Island, Commander Islands, Bering Sea).  
 1885. *Ziphius cavirostris*, *Z. semijunctus*, and *Z. grebnitzkii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).

*Type Locality.* Near Fos, Bouches-du-Rhône, France.

*Range.* Cosmopolitan. The first Canadian record (Ian McTaggart Cowan and James Hatter, Two Mammals New to the Known Fauna of British Columbia, The Murrelet, vol. 21, No. 1, p. 9 (April 30, 1940)) is a beach-worn skull picked up at Fisherman's Bay, near Cape Scott, on the northern tip of Vancouver Island by Alan Lyon of Hardy Bay, B.C., in 1937; believed not to have been previously recorded from the American side of the northern Pacific Ocean, although a number of specimens have been taken in Bering Sea in the vicinity of Bering Island. (B.C.)



Cowan (1945, A beaked whale stranded on the coast of British Columbia, Journ. Mamm., vol. 26, No. 1, pp. 93-94 (Feb. 23, 1945), with halftone from photograph of the stranded whale) records a whale that was stranded near Estevan Point, Vancouver Island, May 25, 1941. Unfortunately the skeleton was broken up by a storm, and only the hyoid bones, a fragment of 1 mandible, and 1 rib were salvaged. The structure of forehead and beak were completely unlike *Berardius* and *Mesoplodon*, both of which have a long slender rostrum. The skeletal fragments and photograph were examined by Remington Kellogg of the U.S. Nat. Museum, compared with skeleton in that institution, and tentatively referred to *Ziphius*. Most of the smaller whales are not valuable enough to hunt commercially, and most of our knowledge comes from specimens that are washed ashore on sea beaches, and, unfortunately, few of them are examined scientifically. Local naturalists can add much to our knowledge of this difficult group of animals by taking photographs, salvaging whatever is possible of the skeletons, and putting their notes on record. (B.C.)

Genus *Hyperoodon* Lacépède. Bottlenose whale

1804. *Hyperoodon* Lacépède, Hist. Nat. Cétacés, Tabl. Ordres, Genres et Espèces, p. xliv.  
Type, *Hyperoodon butskopf* Lacépède=*Balaena ampullata* Forster.

***Hyperoodon ampullatus* (Forster).** BOTTLENOSE WHALE. *Cachalot à gros bec.* *Hyperoodon*.

1770. *Balaena ampullata* Forster, Kalm's Travels into North America, vol. 1, p. 18.  
1885. *Hyperoödon rostratus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).  
1902. *Hyperoodon ampullatus* Rhoads, Science, n.s., vol. 15, p. 756 (May 9, 1902).  
1941. *Hyperoodon ampullatus* Ulmer, Proc. Acad. Nat. Sci. Phila., vol. 93, p. 120 (Sept. 11, 1941). Cites 3 U.S. records.

*Type Locality.* Maldon, Essex, England.

*Range.* "During the summer, Bottlenose Whales frequent the northern seas from Novaya Zemlya and Spitsbergen to the east and west coasts of Greenland, and in winter they sometimes go as far south as the Mediterranean Sea" (Kellogg, 1940, op. cit., p. 67). Records cited by Miller (1923, op. cit., p. 516) from New York Bay; Newport, Rhode Island, and Cape Cod, Massachusetts.

A living specimen stranded on south side of lower St. Lawrence River near Cape Martin, Kamouraska county, Quebec, on September 4, 1940, was examined, measured, and described by Beaugé (1942, op. cit., pp. 23-30).

Paisley (op. cit., MSS. memo., 1945) states that off British Columbia "In 1923, there were 166 Fins (Finbacks) in the total catch of 455. Sperms, Humpbacks and Sulphurs came next in order of numbers in that year, but the kill also included 53 Seis and 2 Bottlenoses.<sup>1</sup> Apparently Right whales and Gray whales were occasionally taken in other days but in late years Sperms, Fins and Humps, and the occasional Sulphur, have made up the catch."

The Department of Fisheries does not have the scientific names of the species of whales taken by the whale-catchers, but the professional whalers are familiar with the larger species that are taken commercially and list them by their well-known vernacular names. The present writer has not been able to find any authentic records of *Hyperoodon ampullatus* from the North Pacific Ocean, and it is probable that casual records may refer to other species of the beaked whales that occur in the North Pacific Ocean. (P.Q., Greenland, Labr.)

<sup>1</sup>Remington Kellogg (1945, in litt.) states that the Bottlenose from North Pacific is probably a *Berardius bairdii*. Schaffer, Victor B., A List of the Marine Mammals of the West Coast of North America, The Murrelet, vol. 23, No. 2, p. 44 (Aug. 14, 1942) quotes Kellogg (1942) that the widely occurring genus *Hyperoodon* "has never been recorded in the North Pacific. Beaked whales have been misidentified so many times that no one can be sure of records unless the skull has been preserved."



Suborder MYSTICETI. Baleen Whales<sup>1</sup>

## Family BALAENIDAE

Genus *Eubalaena* Gray. Right Whales

1864. *Eubalaena* Gray, Proc. Zool. Soc. London, p. 201. Type, *Balaena australis* Desmoulins.<sup>2</sup>

***Eubalaena glacialis* (Borowski).** NORTH ATLANTIC RIGHT WHALE. *Baleine franche*.

1781. *Balaena glacialis* Borowski, Gemeinnützige Naturgeschichte des Theirreichs, vol. 2, pt. 1, p. 18.

1789. [*Balaena*] *glacialis* Bonaterre, Tabl. Encyclop. et Méthod. Règnes Nature, Cétologie, p. 3.

1885. *Balaena biscayensis* True, U.S. Nat. Mus., vol. 7 (1884), p. 591 (1885).

1900. *Eubalaena glacialis* Kükenenthal, Fauna Arctica, vol. 1, p. 207.

*Type Locality.* North Sea.

*Range.* In historic times (A.D. 1100 to 1800) was successively hunted in the Bay of Biscay, along northwestern coast of Norway, around Iceland, in the Gulf of St. Lawrence near Newfoundland, and along the New England coast. A North Atlantic species, now rare or casual in any part of its former range. (N.S., P.Q., Labr., Nfld.)

***Eubalaena sieboldii* (Gray).** NORTH PACIFIC RIGHT WHALE. *Baleine franche du Pacifique*.

1864. *Balaena sieboldii* Gray, Ann. and Mag. Nat. Hist., ser. 3, vol. 14, p. 349 (Nov. 1864).

1866. *Eubalaena sieboldii* Gray, Catal. Seals and Whales, Brit. Mus., p. 96.

*Type Locality.* Coast of Japan and northwest coast of North America. (B.C. ?)

Genus *Balaena* Linnaeus. Bowhead Whale<sup>3</sup>

1758. *Balaena* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 75. Type, *Balaena mysticetus* Linnaeus.

***Balaena mysticetus* Linnaeus.** BOWHEAD. GREENLAND WHALE. GREENLAND RIGHT WHALE. *Baleine arctique*.

1758. [*Balaena*] *mysticetus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 76.

1885. *Balaena mysticetus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 591 (1885).

*Type Locality.* Greenland seas.

*Range.* Arctic waters from Spitzbergen westward to eastern Siberia, approaching the pack ice in Arctic Ocean in summer and moving southward in autumn, but seldom going very far into the North Temperate zone. Formerly common from Spitzbergen to Greenland and Hudson Bay, but hunted almost to extinction in Eastern Arctic between 1612 and 1887. In Western Arctic formerly common regularly in certain localities from northeastern Siberia (Herald Island and Wrangell Island) and northern Alaska, east of Mackenzie River in Beaufort Sea to Banks Island and the western part of Amundsen Gulf; wintering on drifting ice fields about the Aleutian Islands in Bering Sea, the edge of Okhotsk Sea, and the Kurile Islands north of Japan; migrating northward along the Asiatic coast and through Bering Strait in early spring, and from Bering Strait northeastward, following leads in the ice along the Alaskan coast to Point Hope (northwest of Kotzebue Sound) and Point Barrow; seldom seen near the coast east of Barrow until late in the summer, when the migration sweeps southward along the west coast of Banks Island, then westerly off Cape Bathurst (Baillie Island), Cape Dalhousie, and the outer edge of the Mackenzie delta.

<sup>1</sup>Allen, Glover M., The Whalebone Whales of New England, Memoirs Boston Soc. Nat. Hist., vol. 8, No. 2, pp. 107-322, figs. 12, pls. 16, quarto (Sept. 1916). Includes all available records, descriptive anatomy of the species known to the region, biological notes, and personal observations on the New England and Labrador coasts.

<sup>2</sup>Kellogg (1940, op. cit., p. 58) states: "Actually there are three recognizable kinds of Right Whales, of which one (*Eubalaena glacialis*) inhabits the North Atlantic Ocean, another (*E. australis*) the oceans in southern latitudes, and a third (*E. sieboldii*) the North Pacific Ocean."

<sup>3</sup>See also Gray, R., Nature, London, vol. 123, No. 3102, pp. 564-565; Brown, R., Proc. Zool. Soc. London for 1868, p. 534 (1868); Southwell, T., Natural Science, vol. 12, No. 76, pp. 411-412 (June 1929); Degerbøl, M., and Freuchen, P., Report of 5th Thule Exped., The Danish Exped. to Arctic America, etc., Mammals, vol. 2, Nos. 4-5, pp. 270-275 (1935).



along the Alaskan coast to Barrow, thence west on the "off-shore grounds" in September and October about as far as Wrangell Island, Siberia. Hunted by natives from prehistoric times on Asiatic coast of Bering Sea and on North American side from Cape Prince of Wales, Bering Strait, north and east at least to Franklin Bay, Mackenzie district. Commercial whaling began in Bering Sea and neighbouring Arctic regions in 1848, reaching Canadian waters around Herschel Island, Yukon, in 1888. Many American ships wintered at Herschel Island, and others as far east as Baillie Island, Cape Parry, and Langton Bay. The bowheads were soon reduced to limited numbers and whaling was discontinued in the Western Arctic about 1912, although Eskimos with old whaling tackle occasionally killed a bowhead along the shore for domestic uses for some years afterward. Old whaling records from Hudson Bay and Strait and the Arctic Archipelago usually list the catch as "Right whales", but the northern specimens were presumably mostly bowheads, and the Department of Fisheries has issued no authorizations for whaling in those areas for more than 30 years prior to 1945. (N.W.T., Y.T.)

Family RHACHIANECTIDAE

Genus *Rhachianectes* Cope. Gray Whale

1869. *Rhachianectes* Cope, Proc. Acad. Nat. Sci. Phila., p. 15. Type, *Agaphelus glaucus* Cope.

***Rhachianectes glaucus* (Cope).** GRAY WHALE. CALIFORNIA GRAY WHALE. *Baleine grise*.

1868. *Agaphelus glaucus* Cope, Proc. Acad. Nat. Sci. Phila., p. 160.  
1869. *Rhachianectes glaucus* Cope, Proc. Acad. Nat. Sci. Phila., p. 15.  
1885. *Rhachianectes glaucus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).

*Type Locality.* Monterey Bay, California.

*Range.* A shore-loving species found only in the North Pacific Ocean. On the western coast of North America migrates south to latitude of State of Jalisco, Mexico, returning to Bering Sea and Arctic Ocean in spring. On the Asiatic side winters off Korea and Japanese coasts, spending the summer in Okhotsk Sea, Kamchatka coast, and Arctic Ocean. (B.C.)

Family BALAENOPTERIDAE

Subfamily Balaenopterinae. Finbacks

Genus *Balaenoptera* Lacépède<sup>1</sup>

1804. *Balaenoptera* Lacépède, Hist. Nat. des Cétacées; tabl. des ordres, genres et espèces, p. xxxvi. Type, by subsequent selection (Flower, Proc. Zool. Soc. London, 1864, p. 395), *Balaena rostrata* Fabricius=*Balaenoptera acutorostrata* Lacépède.

***Balaenoptera acutorostrata* Lacépède.** SHARP-HEADED FINNER WHALE. PIKE WHALE. LITTLE FINNER. LEAST RORQUAL. *Petit rorqual*.

1804. *Balaenoptera acuto-rostrata* Lacépède, Hist. Nat. des Cétacées; tabl. des ordres genres et espèces, p. xxxvii.  
1872. *Balaenoptera davidsoni* Scammon, Calif. Acad. Sci., vol. 4, pp. 269-270.  
1885. *Agaphalus gibbosus*, *Balaenoptera rostratus*, and *B. davidsoni* True, Proc. U.S. Nat. Mus., vol. 7 (1884), pp. 590, 591 (1885).  
1898. *Balaenoptera acuto-rostrata* Thomas, The Zoologist, ser. 4, vol. 2, p. 99 (March 1898).  
1924. *Balaenoptera acutorostrata* Miller, Bull. 128, U.S. Nat. Mus., p. 506 (Dec. 31, 1924).  
1939. *Balaenoptera acutorostrata* Cowan, Journ. Mamm., vol. 20, No. 2, pp. 215-225, pls. 3, figs. 3 (May 14, 1939).

*Type Locality.* "European seas" (Miller, op. cit., p. 506).

*Range.* North Atlantic and adjacent seas; European coasts; in North American waters, rare in Baffin Bay, common on South Greenland coast and in

<sup>1</sup>Revised by True, The Whalebone Whales of the Western North Atlantic (Smithsonian Contributions to Knowledge, vol. 33), pp. 107-210 (Aug. 29, 1904).



Davis Strait, and on Labrador and Newfoundland coast; Gulf of St. Lawrence, and south to New York and New Jersey. According to Allen (1916, op. cit., p. 274) in North Atlantic "seems to be found chiefly in the cooler waters to the northward of the warm Gulf Stream current."

Cowan (1939, op. cit., The sharp-headed finner whale of the eastern Pacific) described two specimens in the British Provincial Museum, one adult that drifted ashore near Pultney Point Light, Vancouver Island, in autumn of 1936; and one young individual taken at Sooke, Vancouver Island, Aug. 24, 1937. He examined two skulls and a skeleton from Alaska and one skull from Puget Sound in the U.S. Nat. Mus., and a fifth mounted individual is in the San Diego Museum, and considered that in the light of present taxonomic knowledge recognition of a Pacific species is apparently not justified. (B.C., N.B., N.S., N.W.T., P.Q., Labr., Nfld., Greenland.)

**Balaenoptera borealis** Lesson. SEI WHALE. POLLACK WHALE. NORTHERN RORQUAL. RUDOLPHI'S RORQUAL. *Rorqual Sei*.

1828. *Balaenoptera borealis* Lesson, Hist. Nat. Gen. et Partie, Mamm. et Oiseaux, Cétacés, p. 342.

1885. *Sibbaldius laticeps* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 591 (1885).

1898. *Balaenoptera borealis* True, Proc. U.S. Nat. Mus., vol. 21, p. 635 (Nov. 4, 1898).

*Type Locality.* Gromitz, Lübeck Bay, Schleswig-Holstein, Germany.

*Range.* Atlantic and Pacific oceans, ranging north to Spitzbergen, Iceland, and Bering Sea, and southward to the northern limit of drift ice in the Antarctic seas; returning to tropical and subtropical waters for breeding and calving.

Ira G. Cornwall, F.G.S. (Collecting at Cachalot Whaling Station, Can. Field-Nat., vol. 42, No. 1, pp. 9-12, Feb. 20, 1928) spent one month in summer of 1925 at the Cachalot Whaling Station on south side of Kyuquot Sound on northwest coast of Vancouver Island, doing research work on the whale barnacles and other external or internal parasites that could be found. Only 32 whales of 3 species were brought in during the time, 14 "Sei" whales (*B. borealis*), 14 "Finbacks" (*B. physalus*), and 4 "Humpbacks" (*M. novaeangliae*). The shore stations had been established on Vancouver Island 25 or 30 years before, but 1925 was the last season the station was in operation, and whales were getting scarcer year by year. (B.C., N.B., N.S., N.W.T., P.Q., Labr., Nfld.)

**Balaenoptera physalus** (Linnaeus). COMMON FINBACK. *Rorqual commun*.

1758. [*Balaena*] *physalus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 75.

1862. *Balaenoptera physalus* Schlegel, De Dieren van Nederland, Zoogdieren, p. 101.

1885. *Physalus antiquorum*, *Sibbaldius tuberosus*, *S. tectirostris*, and *S. veliferus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 591 (1885).

1898. *Balaenoptera physalus* True, Proc. U.S. Nat. Mus., vol. 21, p. 633 (Nov. 4, 1898).

1901. [*Balaenoptera velifera*] *copei* Elliot, Synopsis Mamm. North Amer., p. 13 (March 1901). (Shumagin Islands, Alaska.)

*Type Locality.* Spitzbergen seas. (See Thomas, Proc. Zool. Soc. London, 1911, p. 156.)

*Range.* Cosmopolitan, occurring in all the large oceans, limited in its northward range by the pack ice of the Arctic Ocean and in the south by the Antarctic ice. In the summer it reaches the open seas about Spitzbergen, following the northeastern extension of open water. On western side of Atlantic Ocean it is uncommon north of Davis Strait, but may follow open water in Baffin Bay as far north as Melville Island on west coast of Greenland; seldom comes near the coast, but has been recorded as common off the Labrador and Newfoundland coasts, and taken in Bay of Fundy, off Cape Cod, Nantucket, Massachusetts coast, Rhode Island coast, and off Long Island, New York. Formerly common on west coast of Vancouver Island (Cornwall, 1928, op. cit.), and ranges on North Pacific coast at least as far north as the Aleutian Islands. H. F. S. Paisley (1945, MSS. memo., op. cit.) states that some earlier records



indicate that finbacks were at one time taken in the greatest numbers. In 1923, there were 166 finbacks in the total catch of 455 whales (on the B.C. coast). Sperm whales, humpback whales, and sulphur-bottom whales came next in order of numbers in that year. The finback is one of the speediest of all whales, with elongated body, old adults reaching a length of about 82 feet; high, curved dorsal fin. The longest blades of whalebone measure 20 to 36 inches. This species was seldom hunted by the old-time whalers. (B.C., N.B., N.S., N.W.T., P.Q., Labr., Nfld., Greenland.)

#### Genus *Sibbaldus* Gray. Blue Whale

1864. *Sibbaldus* Gray, Proc. Zool. Soc. London, 1864, p. 222. Type, by tautonymy, *Sibbaldus borealis* Gray=*Physalus sibbaldii* Gray=*Balaena musculus* Linnaeus.

*Sibbaldus musculus* (Linnaeus). BLUE WHALE. SULPHUR-BOTTOM WHALE. *Rorqual gris*. *Baleine bleue*.

1758. [*Balaena*] *musculus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 76.

1885. *Physalus sibbaldii* and *Sibbaldius sulfureus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 591 (1885).

1898. *Balaenoptera musculus* True, Proc. U.S. Nat. Mus., vol. 21, p. 633 (Nov. 4, 1898).

1923. *Sibbaldus musculus* Miller, Smiths. Misc. Coll., vol. 76, No. 5, p. 20 (Aug. 31, 1923).

*Type Locality*. Firth of Forth, Scotland. (See Thomas, Proc. Zool. Soc. London, 1911, p. 156.)

*Range*. In summer near the polar pack ice of both hemispheres; rarely seen in tropical latitudes; migrations apparently correlated with the period of abundance of small crustaceans on which they feed. One specimen from New Jersey in Acad. Nat. Sci. Phila.; rarely seen off the New England coast (Mass., Maine); sometimes entering the Gulf of St. Lawrence where they have been taken in numbers as far up as Seven Islands (Allen, 1916, p. 255); common off Newfoundland in summer; northward as far as Davis Strait; the coasts of southern Greenland; and perhaps into Baffin Bay; northeast of Greenland, to Iceland, Novaya Zemlya, and Jan Mayen Islands.

"The Blue Whale is the largest mammal that has ever lived either on land or in the water. Three females 100 feet in length have been taken in the Antarctic in one season. A Blue Whale 89 feet long and 45 feet in circumference weighed more than 119 tons; it yielded 166 barrels of oil" (Kellogg, 1940, op. cit., p. 57).

H. F. S. Paisley (op. cit., MSS., memo., 1945) states that "In 1923, there were 166 Finbacks in the total catch of 455 whales (on the British Columbia coast). Sperm whales, humpback whales and sulphur-bottom whales came next in order of numbers in that year, but the kill also included 53 Sei whales and 2 Bottlenose whales (?).....In late years Sperm whales, Finbacks and Humpbacks, and the occasional Sulphur-bottom, have made up the catch." (B.C., N.S., P.Q., Labr., Nfld., Greenland.)

#### Subfamily Megapterinae. Humpbacks

##### Genus *Megaptera* Gray

1846. *Megaptera* Gray, Zool. Voy. H.M.S. *Erebus* and *Terror*, vol. 1, Mamm., p. 16. Type, *Balaena nodosa* Bonaterre.

*Megaptera novaeangliae* (Borowski). HUMPBAC WHALE. *Baleine à bosse*. *Mégaptère*.

1781. *Balaena novae angliae* Borowski, Gemeinnützige Naturgeschichte des Thierreichs, vol. 2, pt. 1, p. 21. (See Kellogg, R., Proc. Biol. Soc. Wash., vol. 45, 1932, pp. 147-148.)

1789. [*Balaena*] *nodosa* Bonaterre, Tabl. Encyclop. et Method. Règnes Nature, Cétologie, p. 5.

1885. *Megaptera longimana*, *M. bellicosa*, and *M. versabilis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 591 (1885).

1901. [*Megaptera*] *nodosa* Elliot, Synopsis Mamm. North. Amer., p. 10 (March 1901).

1924. *Megaptera nodosa* Miller, List North Amer. Recent Mamm., 1923, Bull. U.S. Nat. Mus., No. 128, p. 506 (Dec. 31, 1924).



*Type Locality.* Coast of New England.

*Range.* Generally distributed in the oceans of the world, passing the winter in tropical or subtropical waters, migrating regularly along well-defined courses, and returning to Arctic and Antarctic oceans in spring.

H. F. S. Paisley (op. cit., MSS., memo., 1945) states that "In 1923 there were 166 Finbacks in the total catch of 455 whales (on the British Columbia coast). Sperm whales, humpback whales and sulphur-bottom whales came next in order of numbers in that year but the kill also included 53 Sei whales and 2 Bottlenose whales [?]. In late years Sperm whales, Finbacks and Humpbacks, and the occasional Sulphur-bottom, have made up the catch." Cornwall (1928, op. cit., p. 11) states that at Cachalot Whaling Station on south side of Kyuquot Sound, Vancouver Island, during the month he was there in 1925, 32 whales were taken, 4 of them humpbacks. (See also Andrews, R. C., Rept. Prov. Mus. British Columbia, for 1921, pp. 9-11, pls. 2 (1922); and Kellogg, R., Smiths. Rept. for 1928, publ. 2997, Wash., pp. 467-494, pls. 2 (1929).) (B.C., N.B., N.S., P.Q., Labr., Nfld.)

### Order **Rodentia**. Rodents.<sup>1</sup>

Suborder DUPLICIDENTATA. Hares, Rabbits, and Mouse-hares<sup>2</sup>

Family OCHOTONIDAE. Pikas, Mouse-hares

Genus *Ochotona* Link<sup>3</sup>

1795. *Ochotona* Link, Beyträge zur Naturgesch., vol. 1, pt. 2, p. 74. Type, *Lepus ogotona* Pallas.

Subgenus *Pika* Lacépède

1799. *Pika* Lacépède, Tableau des Divisions etc., Mamm., p. 9. Type, *Lepus alpinus* Pallas.

1904. *Pika* Lyon, Smiths. Misc. Coll., vol. 45, p. 438 (June 15, 1904).

\**Ochotona collaris* (Nelson). COLLARED PIKA. *Pica à collet*.

1893. *Lagomys collaris* Nelson, Proc. Biol. Soc. Wash., vol. 8, p. 117 (Dec. 21, 1893).

1897. [*Ochotona*] *collaris* Trouessart, Catal. Mamm., viv. foss., p. 648.

*Type Locality.* Near head of Tanana River, about 200 miles south of Fort Yukon, Alaska. (Type: U.S.N.M., No. 36297/14384.)

*Range.* From south-central Alaska (Chitina R. Glacier\* 3, Mount McKinley, Seward Creek, Tanana River, White Pass); central and southern Yukon (Ogilvy Mountains), Conrad\* 1, Teslin Lake\* 1, Canol Road (Ross River, Mile 96\* 8; Macmillan Pass, Mile 282\* 2); east to head of Carcajou River\*, Canol Road, Mile 111E, Mackenzie district\* 1, taken Sept. 6, 1944, and pikas were heard squeaking on rock slides at Mile 63E on Little Keele River a day or two later (the first records from Northwest Territories, A. L. Rand, 1944); south to extreme northwestern British Columbia (Bennett, Tagish Lake). (B.C., N.W.T., Y.T.)

\**Ochotona princeps princeps* (Richardson). ROCKY MOUNTAIN PIKA. *Pica des Rocheuses*.

1828. *Lepus* [*Lagomys*] *princeps* Richardson, Zool. Journ., vol. 3, p. 520.

1897. [*Ochotona*] *princeps* Trouessart, Catal. Mamm. viv. foss., p. 648.

*Type Locality.* "Stony places in the Rocky Mountains"; probably head of Athabaska River, Alberta, Canada. (See Preble, North Amer. Fauna, No. 27, p. 198 (Oct. 26, 1908).)

<sup>1</sup>Supergeneric groups revised by Miller and Gidley, Journ. Wash. Acad. Sci., vol. 8, pp. 431-448 (July 19, 1918).

<sup>2</sup>Families and genera revised by Lyon, Smithsonian Miscell. Coll., vol. 45, pp. 321-447 (June 15, 1904). For status of group See Gidley, Science, N.S., vol. 36, pp. 285-286 (Aug. 30, 1912).

<sup>3</sup>The pikas are small, rabbit-like animals with tails hidden by fur and almost invisible, sometimes popularly called "conies", or more commonly "rock-rabbits". The genus *Ochotona* is widely distributed in Asia and extreme eastern Europe. In North America they do not occur east of the Rocky Mountains, ranging from the Mount McKinley Range of central Alaska and the Ogilvy Mountains in central Yukon south to southern California and northern New Mexico, with wide gaps where no pikas are found as they live in rock slides, and extensive plains or deserts are unsuited to their habitat. The discontinuous distribution has resulted in the development of numerous local races or subspecies. See Howell, A.H., Revision of the American Pikas (genus *Ochotona*), North Amer. Fauna, No. 47, pp. 1-57, figs. 4, pls. 6 (Aug. 21, 1924).



*Range.* Rocky Mountains, from eastern British Columbia (headwaters south Pine River) and western Alberta (Muskeg Creek, about 60 miles north of Jasper House), Jasper National Park\*, south along the main divide to southeastern British Columbia (Morrissey\*), western Montana, and northeastern Idaho (Bitter Root Mountains). (Alta., B.C.)

**\*Ochotona princeps brooksi** Howell. SHUSWAP PIKA. *Pica de Shuswap*.

1924. *Ochotona princeps brooksi* Howell, North Amer. Fauna, No. 47, pp. 30-31 (Aug. 21, 1924).

*Type Locality.* Sicamous, British Columbia. (Type: U.S.N.M., No. 69275.)

*Range.* From mountains east of Shuswap Lake (Skyline Mine\* 1, Sicamous\* 4), Griffin Lake\* on South Thompson River 2, west to Lillooet district (Mount McLean\* 1, McGillivray Creek\* 6); limits of range not definitely known. (B.C.)

**\*Ochotona princeps brunnescens** Howell. CASCADE PIKA. *Pica brun des montagnes Cascades*.

1919. *Ochotona fenisex brunnescens* Howell, Proc. Biol. Soc. Wash., vol. 32, p. 108 (May 20, 1919).

1924. *Ochotona princeps brunnescens* A. H. Howell, North Amer. Fauna, No. 47, p. 31 (Aug. 21, 1924).

*Type Locality.* Keechelus, Kittitas county, Washington. (Type: U.S.N.M., No. 227259.)

*Range.* Cascades Mountains from Crater Lake in southwestern Oregon, north with interrupted range to Mount Hood, along the Cascades in Washington to southwestern British Columbia (Lihumitson Park\* 6, Tami Hy Creek\* 3, Chilliwack\* 1, Vancouver\* 1, and Hope). In Alta Lake region northwest of Fraser River about 90 miles northeast of Vancouver, from 2,000 to 6,000 feet (Alta Lake, Alpha Lake, London Mountain, Sproat Mountain), Racey and Cowan, 1935, p. H28. (B.C.)

**\*Ochotona princeps cuppes** Bangs. BANGS' PIKA. *Pica de Bangs*.

1899. *Ochotona cuppes* Bangs, Proc. New England Zool. Club, vol. 1, p. 40 (June 5, 1899).

1924. *Ochotona princeps cuppes*, A. H. Howell, North Amer. Fauna, No. 47, p. 27 (Aug. 21, 1924).

*Type Locality.* Monashee Divide, Gold Range, British Columbia, Canada. Altitude, 4,000 feet. (Type: M.C.Z., No. 7389.)

*Range.* Southeastern interior of British Columbia, from western part of Columbia River Valley (Rossland-Trail region, Rossland\*, 4,000 feet, 6; Green Mountain\*, 6,000 feet, 5; Old Glory Mountain\*, 7,000 feet, 1), Monashee divide in Gold Range, and Nelson, north to glacier in Selkirk Mountains; south to Cabinet Range in extreme northern Idaho, and to Sullivan Lake, Pend-d'Oreille county, in extreme northeastern Washington. (B.C.)

**\*Ochotona princeps fenisex** Osgood. ASHNOLA PIKA. *Pica d'Ashnola*.

1863. *Lagomys minimus* Lord, Proc. Zool. Soc. London, p. 96. (Not of Schinz, 1821.)

1899. *Ochotona minimus* Bangs, Proc. New England Zool. Club, vol. 1, p. 39 (June 5, 1899).

1913. *Ochotona fenisex* Osgood, Proc. Biol. Soc. Wash., vol. 26, p. 80 (March 22, 1913). (Substitute for *minimus* Lord.)

1924. *Ochotona princeps fenisex* A. H. Howell, North Amer. Fauna, No. 47, p. 29 (Aug. 21, 1924).

*Type Locality.* Ptarmigan Hill, near head of Ashnola River, east side of Cascade Range, British Columbia, Canada. Altitude, about 7,000 feet. (Type: Br. Mus. Nat. Hist., skin No. 62.12.30.11.)

*Range.* Interior mountain ranges on east side of Cascades in northern Washington from vicinity of Wenatchee, Chelan county, north in British Columbia to upper end of Okanagan Lake (Okanagan, and mountains west of Okanagan Lake), Similkameen River Valley (Stirling Creek\* 2,100 feet, near Hedley, 4 specimens; Tulameen). (B.C.)



**\**Ochotona princeps levis* Hollister.** HOLLISTER PIKA. *Pica de Hollister.*

1912. *Ochotona levis* Hollister, Proc. Biol. Soc. Wash., vol. 25, p. 57 (April 13, 1912).

1924. *Ochotona princeps levis* A. H. Howell, North Amer. Fauna, No. 47, p. 16 (Aug. 21, 1924).

*Type Locality.* Chief Mountain Lake, Flathead county, Montana. (Type: U.S.N.M., No. 12000/22241.)

*Range.* Mountains of southern Alberta and northern Montana east of the main divide of the Rocky Mountains, from Waterton Lakes National Park\* to the Belt Mountains of Montana. (Alta.)

**\**Ochotona princeps lutescens* Howell.** BANFF PIKA. ALBERTA PIKA. *Pica de Banff.*

1919. *Ochotona princeps lutescens* Howell, Proc. Biol. Soc. Wash., vol. 32, p. 105 (May 20, 1919).

*Type Locality.* Mount Inglesmaldie at about 8,000 feet altitude, near Banff, Alberta, Canada. (Type: U.S.N.M., No. 108650.)

*Range.* Rocky Mountains in Banff National Park, Alberta (Banff\* 2; Boom Lake\* 27 miles west of Banff, 6,500 feet, 2; Bryant Creek\* 1; Cascade Basin\*, 7,000 feet, 5; Mistaya Creek\*, Banff-Jasper Highway, 6,400 feet, 2; south to Mount Forget-me-not\*, 50 to 75 miles southwest of Calgary, 3). Two specimens from eastern part of Jasper National Park (Snake Indian River\* 1, and Wall Pass Trail\* 1) are also referable to this form. A well-marked race, characterized by small size and pale coloration. (Alta.)

Family LEPORIDAE. Hares and Rabbits

Genus *Lepus* Linnaeus<sup>1</sup>

1758. *Lepus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 57. Type, *Lepus timidus* Linnaeus.

1904. *Lagos* Palmer, Index Gen. Mamm. p. 361 (Jan. 23, 1904). Type, *Lepus arcticus* Ross.

Subgenus *Lepus* Linnaeus

1904. *Poecilolagus* Lyon, Smiths. Misc. Coll., vol. 45, p. 395 (June 15, 1904). Type *Lepus americanus* Erxleben.

**\**Lepus arcticus arcticus* Ross.** AMERICAN ARCTIC HARE. *Lièvre arctique d'Amérique.*

1819. *Lepus arcticus* Ross, Voyage of Discovery, H.M.S. *Isabella* and *Alexander*, Baffin's Bay, Northwest Passage, ed. 2, vol. 2, Appendix 4, p. 151 (1819).

1819. *Lepus glacialis* Leach, in Ross, Voyage of Discovery, ed. 2, vol. 2, p. 170 (1819). Same type and locality as for *arcticus*.<sup>2</sup>

1885. *Lepus timidus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885). (Not of Linnaeus, 1758.)

1936. *Lepus arcticus arcticus* Howell, Journ. Mamm., vol. 17, No. 4, p. 318 (Nov. 14, 1936).

*Type Locality.* Possession Bay, Bylot Island, latitude 73° 27' N., district of Franklin, Northwest Territories, Canada.

*Range.* From Bylot Island and northern Baffin Island (Pond Inlet region, Tulukane\* 18 miles west, Eguksuak\* 8 miles east, James Creek\*) south for an undetermined distance on east coast; south in western Baffin Island along east side of Foxe Basin in rocky highlands to about 67° 30' N., where the grassy tundra land begins (14 specimens in T. H. Manning coll. 1938-40, examined); west side of Foxe Basin along coast of Melville Peninsula (Fury and Hecla

<sup>1</sup>Revised by Nelson, E.W., The Rabbits of North America, North Amer. Fauna, No. 29, pp. 58-158. See also Howell, A. H., A Revision of the American Arctic Hares, Journ. Mamm., vol. 17, No. 3, pp. 315-337, figs. 3, including distribution map (Nov. 14, 1936); and Dalquest, W. W., Geographic Variation in Northwestern Snowshoe Rabbits, Journ. Mamm., vol. 23, No. 2, pp. 166-183, 2 figs., including distribution map of 10 races of *Lepus americanus* (May 14, 1942).

<sup>2</sup>See Rhoads, Amer. Nat., vol. 30, pp. 234-235 (March 1896); Stone, Auk, vol. 13, pp. 183-187 (April 1896); Merriam, Science, n. s., vol. 3, pp. 564-565 (April 10, 1896); Rhoads, Science, n. s., vol. 3, pp. 843-845 (June 5, 1896); Merriam, Science, n. s., vol. 3, p. 845 (June 5, 1896); Howell, A. H., Journ. Mamm., vol. 17, No. 3, p. 318.



Strait\*, Igloolik\*, and Ahadzar\* islands and mainland\* in vicinity, collected by the late Reynold J. O. Bray in 1937); southern and western limits of range not definitely known, as specimens are not available from districts where hares are known to occur in northern Keewatin and the interior islands of the Canadian Arctic Archipelago. (N.W.T.)

†\***Lepus arcticus andersoni** Nelson. BARREN GROUNDS HARE. *Lièvre des plaines arctiques*.

1934. *Lepus arcticus andersoni* Nelson, E. W., Proc. Biol. Soc. Wash., vol. 47, pp. 83-86 (March 8, 1934).

1902. *Lepus arcticus canus* Preble, North Amer. Fauna, No. 22, p. 59 (Oct. 31, 1902). Hubbart Point, west coast of Hudson Bay, Manitoba, Canada. (In part, specimens from Franklin and Mackenzie districts.) Synonym of *Lepus arcticus labradorius* Miller (1899).

*Type Locality.* Cape Barrow, Coronation Gulf, district of Mackenzie, Northwest Territories, Canada, latitude 67° 59' 32" N., longitude 110° 06' 15" W.; collected August 14, 1915, by R. M. Anderson, orig. No. 511. (Type: N.M.C., No. 2858.)

*Range.* Arctic drainage of Mackenzie district, Northwest Territories, from north side of Great Slave Lake (Fort Rae), Hanbury Lake, and Aylmer Lake, and to the Arctic coast and southern parts of Victoria Island (Cambridge Bay, Mackenzie Creek\*) and Banks Island (Cape Kellett\*, about latitude 72° N., longitude 125° W.). No specimens are available from east of Bathurst Inlet\* and Beechey Lake on upper Back River in Mackenzie district, but probably occurs farther east to meet the range of *L. a. labradorius* on west side of Hudson Bay. West along the Arctic coast and to edge of scattered timber at northern edge of Hudsonian Life zone to Coronation Gulf (Cape Barrow\*, type; Gray Bay\*, Port Epworth\* at mouth of Tree River, lower Coppermine River at Sandstone Rapids\*, Cape Kendall\* and Cape Krusenstern\*), Dismal Lake\* northeast of Great Bear Lake, Dolphin and Union Strait (Bernard Harbour\*, Liston Island\*), Cape Parry, Langton Bay near south end of Franklin Bay, and old Fort Anderson on lower Anderson River. No specimens known from west of Anderson River, but A. E. Porsild states that hares are sometimes killed in Reindeer Hills east of lower Mackenzie River delta within the limit of trees. (N.W.T.)

**Lepus arcticus bangsii** Rhoads. NEWFOUNDLAND HARE. *Lièvre de Terre-Neuve*.

1896. *Lepus arcticus bangsii* Rhoads, Amer. Nat., vol. 30, p. 236 (March 1896).

1936. *Lepus arcticus bangsi* A. H. Howell, Journ. Mamm., vol. 17, No. 4, 324 (Nov. 14, 1936).

*Type Locality.* Codroy, Newfoundland. (Type: M.C.Z., No. 3752, Bangs Coll.)

*Range.* Newfoundland and the treeless coast belt of Labrador from the Strait of Belle Isle north to about latitude 55 degrees north (Hopedale, Makkovik, Pomialuk); now restricted in Newfoundland to bare hill tops and exterminated in parts of the Labrador coast. Vertical range from sea-level up to an undetermined altitude; zonal range, Arctic. (Nfld., Labr.)

\***Lepus arcticus groenlandicus** Rhoads. GREENLAND HARE. *Lièvre du Groenland*.

1896. *Lepus groenlandicus* Rhoads, Amer. Nat., vol. 30, p. 236 (March 1896).

1909. *Lepus groenlandicus* Nelson, North Amer. Fauna, No. 29, pp. 67-69 (Aug. 31, 1909). Northwestern coasts of Greenland and Ellesmere Land.

1930. *Lepus variabilis hyperboreus* Pedersen, Medd. om. Grønl., vol. 77, p. 363. Eastern Greenland.

1934. *Lepus arcticus persimilis* Nelson, Proc. Biol. Soc. Wash., vol. 47, pp. 84-86 (March 8, 1934). South side of Clavering Island, East Greenland. Type, Acad. Nat. Sci. Phila., No. 13461. Renaming of *Lepus variabilis persimilis* Pedersen, 1930; name preoccupied by *Lepus hyperboreus* Pallas, Zoographia, Rosso-Asiatica, vol. 1, p. 152, 1831, applied to a species of *Ochotona* of eastern Siberia.

1936. *Lepus arcticus groenlandicus* A. H. Howell, Journ. Mamm., vol. 17, No. 4, p. 330 (Nov. 14, 1936). Restricts this form to Greenland.



*Type Locality.* Robertson Bay, northwestern Greenland. (About latitude 76° 45' N., longitude 70° 10' W., about 60 miles southeast of Etah.) (Type: Acad. Nat. Sci. Phila., No. 1486.)

*Range.* Coastal belt and adjacent islands of northern Greenland on the west coast from about Disko Bay south of which it intergrades with *L. a. porsildi*, north to the extreme northern tip of Greenland at about 83° 40' N., and to a little beyond Cape Dalton south of Scoresby Sound (approximately 70° N.). Two skulls in N.M.C. collection from Olrik Bay\*, 76° 21' N., 68° 42' W., presented by Capt. Robt. A. Bartlett, in 1937. (N. Greenland.)

\****Lepus arcticus labradorius*** Miller. HUDSON BAY ARCTIC HARE. *Lièvre de la baie d'Hudson.*

1899. *Lepus labradorius* Miller, Proc. Biol. Soc. Wash., vol. 13, p. 39 (May 29, 1899).

1902. *Lepus arcticus canus* Preble, North Amer. Fauna, No. 22, pp. 59-61 (Oct. 31, 1902). Hubbart Point, west coast of Hudson Bay, extreme northeastern Manitoba, about 75 miles north of Churchill. (Type: U.S.N.M., No. 106860.)

1909. *Lepus arcticus* Nelson, North Amer. Fauna, No. 29, pp. 61-64 (Aug. 1909). (In part.)

1924. *Lepus arcticus labradorius* Allen and Copeland, Journ. Mamm., No. 5, No. 1, p. 12 (Feb. 12, 1924).

*Type Locality.* Fort Chimo, Ungava Bay, Quebec, Canada. (Type: U.S.N.M., No. 23132/14149.)

*Range.* Region around Hudson Strait and northern part of Hudson Bay, on east side from Great Whale River north to Hudson Strait, Ungava Bay (Chimo\*), and northern coastal region of Labrador south to Davis Inlet (Cape Mugford, Nain, Ramah, Solomon's Island), and on west side from Churchill, Manitoba, north to Cape Fullerton and Southampton Island, and southern Baffin Island at least to north side of Cumberland Sound (Blacklead Island\*, Kingua Fiord\*, Nettiilling Fiord\*, Pangnirtung\*) on east coast, and on west coast from Cape Dorset\* north to Bowman Bay\*. Western limits of range not determined, but presumably intergrades with *arcticus* in northeast Keewatin west of Melville Peninsula, and with *andersoni* farther southward. (Man., P.Q., N.W.T.)

\****Lepus arcticus monstrabilis*** Nelson. CANADIAN POLAR HARE. ELLESMERE ISLAND HARE. *Lièvre polaire du Canada.*

1934. *Lepus arcticus monstrabilis* Nelson, Proc. Biol. Soc. Wash., vol. 47, pp. 83-86 (March 8, 1934).

1909. *Lepus groenlandicus* Nelson, North Amer. Fauna, No. 29, pp. 67-69 (Aug. 31, 1909). (In part: at that time included 1 specimen from Bache Peninsula and 2 from Buchanan Bay.)

1934. *Lepus arcticus groenlandicus* Degerbøl and Braestrup, The geographical variation of the Greenland hares, Vidensk. Medd. fra Dansk. naturh. Foren., Bd. 98, pp. 197-206, figs. 3 (Dec. 15, 1934). These authors state (p. 205): "We do not think that the Ellesmere Land hares (*L. a. monstrabilis*) are distinct from this form." They had no specimens from Northwest Greenland, the typical region of *groenlandicus*, and based comparisons on measurements of type and 3 topotypes and a photograph published by Rhoads (1896), and photographs of 1 specimen from Ellesmere Island (Nelson, 1909). Howell's later monograph (1936) listed 64 specimens from Greenland which he referred to *groenlandicus* and 29 specimens from Ellesmere Island and 1 from Devon Island referred to *monstrabilis*, and agreed with Nelson (1934) in considering the two races separable, principally in *monstrabilis* having larger skull and greater external measurements.

1936. *Lepus arcticus monstrabilis* A. H. Howell, Journ. Mamm., vol. 17, No. 4, p. 329 (Nov. 14, 1936).

*Type Locality.* Buchanan Bay, Ellesmere Island, Northwest Territories, Canada. (Type: U.S.N.M., No. 126169.)

*Range.* All of Ellesmere Island (Craig Harbour\*), and Devon Island (Dundas Harbour\*), and probably also Axel Heiberg Island of the Sverdrup Islands group just west of Ellesmere Island; limits of range to westward unknown. Presumably occurs sporadically and intergrading with *L. a. groen-*



*landicus* on coast of Northwest Greenland. The northern hares often take shelter in broken pressure-ridge ice near the coast and Fielden (1877, p. 351) found them on the ice 20 miles to the north of Grant Land, northern edge of Ellesmere Island, and they have been seen on sea ice in Smith Sound, east of Ellesmere Island. The writer has also seen *L. a. andersoni* on pressure-ridge ice near shore of Cape Parry peninsula in Franklin Bay. (N.W.T., NW. Greenland?)

**\**Lepus arcticus porsildi* Nelson.** SOUTH GREENLAND HARE. *Lièvre du Groenland sud.*

1934. *Lepus arcticus porsildi* Nelson, Proc. Biol. Soc. Wash., vol. 47, pp. 83-86 (March 8, 1934).

1934. *Lepus arcticus porsildi* Degerbøl and Braestrup, The geographical variation of the Greenland hares, Vidensk. Medd. fra Dansk. naturh. Foren., Bd. 98, pp. 197-205, figs. 3 (Dec. 15, 1934).

1936. *Lepus arcticus porsildi* A. H. Howell, Revision of the American Arctic Hares, Journ. Mamm., vol. 17, No. 3, p. 331 (Nov. 14, 1936). (No reference to paper by Degerbøl and Braestrup (op. cit.).)

*Type Locality.* From near Julianehaab, southern Greenland, latitude 61° 21' N. (Type: U.S.N.M., No. 248723.)

*Range.* From extreme southern Greenland north to about Disko Bay, about latitude 69° N. Intergrading with *L. a. groenlandicus* from Sukkertoppen (about latitude 66° N.) to Disko Bay. Skulls in National Museum of Canada from near Godthaab\*, southwest Greenland. (S. Greenland.)

**\**Lepus townsendii townsendii* Bachman.** WESTERN WHITE-TAILED JACK RABBIT. GREAT BASIN WHITE-TAILED JACK RABBIT. *Gros lièvre de la grande bassin.*

1839. *Lepus townsendii* Bachman, Journ. Acad. Nat. Sci. Phila., vol. 8, pt. 1, p. 90, pl. 2.

1904. *Lepus campestris townsendi* Merriam, Proc. Biol. Soc. Wash., vol. 17, p. 132 (May 14, 1904).

1915. *Lepus townsendi townsendi* Hollister, Proc. Biol. Soc. Wash., vol. 28, p. 70 (March 12, 1915).

*Type Locality.* Fort Walla Walla, near present town of Wallula, Walla Walla county, Washington. (Type: Present location unknown, probably no longer extant, Nelson, 1909, p. 78.)

*Range.* Great Basin region, including east slopes of Cascade Range, and thence east to Rocky Mountains, occupying eastern Washington and Oregon, and north into Okanagan Valley (Oliver\*, Osoyoos\*, north to Fairview), British Columbia; and from the northeastern corner of California easterly through northern Nevada, western and southern Idaho, extreme southwestern Wyoming, most of Utah, and Colorado from western border to summit of Rocky Mountains. Vertical range from about 1,000 feet in eastern Washington to 12,000 feet in Colorado; zonal range, mainly upper Sonoran and transition, but reaches up to Hudsonian in the mountains of Colorado. (B.C.)

**\**Lepus townsendii campanius* Hollister.** WHITE-TAILED JACK RABBIT. *Gros lièvre des prairies.*

1837. *Lepus campestris* Bachman, Journ. Acad. Nat. Sci. Phila., vol. 7, p. 349. (Not of Meyer, 1790.)

1885. *Lepus campestris* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885).

1915. *Lepus townsendii campanius* Hollister, Proc. Biol. Soc. Wash., vol. 28, p. 70 (March 12, 1915).

*Type Locality.* Plains of the Saskatchewan, Canada (probably near Carlton House). No type specimen designated.

*Range.* Great Plains region in Alberta, Saskatchewan, and Manitoba, Canada, and thence south on plains of the United States, east of the Rocky Mountains, over Montana, Wyoming (except extreme southwestern part), the Dakotas, Minnesota to the extreme southeastern corner (Lanesboro), Iowa east to the Mississippi River (Muscatine), Nebraska, northern half of Kansas, Colorado east of summit of the Rocky Mountains, and middle northern border



of New Mexico. Vertical range from less than 1,000 feet in Iowa up to at least 10,000 feet on the mountains of Colorado; zonal range, mainly upper Sonoran and Transition on the plains of the western United States, extending into Canadian on the mountains and the northern part of its range. (Alta.\*, Man.\*, Sask.\*, and extreme western Ontario, Rainy River.)

**\**Lepus europaeus europaeus* Pallas.** EUROPEAN HARE. *Lièvre de l'Europe.*

1778. *Lepus europaeus* Pallas, Nov. Spec. Quadr. Glir. Ord., p. 30.

*Type Locality.* Burgundy, France.

*Range.* Introduced and established in Ontario and the northeastern United States. (See Anderson, Can. Field-Nat., vol. 37, pp. 75-76 (April 1923).) Well established and slowly spreading in southern Ontario north of Lake Erie (St. Thomas\* and Woodstock\*), west and north of Lake Ontario (Toronto\*) to east side of Lake Huron (Goderich). Commonly called "jackrabbit" in Ontario, but does not turn white in winter like the native jackrabbits of Western Canada, which do not range east of the Great Lakes. (Ont.)

**\**Lepus americanus americanus* Erxleben.** AMERICAN VARYING HARE. AMERICAN SNOWSHOE RABBIT. *Lièvre d'Amérique.*

1777. [*Lepus*] *americanus* Erxleben, Syst. Regni Anim., vol. 1, p. 330.

1885. *Lepus americanus americanus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885).

1899. *Lepus bishopi* Allen, Bull. Amer. Soc. Nat. Hist., vol. 12, p. 11, Mill Lake, Turtle Mountains, North Dakota, March 4, 1899. ("No definite type" Nelson, 1909, p. 87.) Turtle Mountains, North Dakota.

*Type Locality.* Hudson Bay, Canada. (No definite type.)

*Range.* Region about southern end of Hudson Bay, including southern Keewatin; southeastern Mackenzie; most of Saskatchewan; Manitoba; east through northern Ontario (including Isle Royale and Michipicoten Island, Lake Superior); northern Quebec; all of Ungava except extreme northern part; Labrador; south in the United States in all of Michigan north of Saginaw (except western half of northern peninsula), and west in an isolated colony on the Bighorn Mountains, Wyoming. Intergrades with *struthopus* in eastern Quebec, with *virginianus* in southwestern Quebec, and with *macfarlani* in extreme northern Alberta and southwestern Mackenzie district. Vertical range, from sea-level at Hudson Bay to about 2,000 feet near Lake Superior and 10,000 feet in the Bighorn Mountains of Wyoming; zonal range, mainly Canadian. (Alta., Man., N.W.T., Ont., P.Q., Sask.)

**\**Lepus americanus bairdii* Hayden.** ROCKY MOUNTAINS SNOWSHOE RABBIT. *Lièvre des Rocheuses.*

1869. *Lepus bairdii* Hayden, Amer. Nat., vol. 3, p. 115 (May 1869).

1885. *Lepus americanus bairdii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885).

1909. *Lepus bairdi* Nelson, North Amer. Fauna, No. 29, p. 109 (Aug. 31, 1909).

1942. *Lepus americanus bairdii* Dalquest, Journ. Mamm., vol. 23, No. 2, p. 180 (May 14, 1942).

*Type Locality.* Near Fremont Peak, Wind River Mountains, Fremont county, Wyoming. (Type: U.S.N.M., No. 4262/38001.)

*Range.* High parts of Rocky Mountains from central New Mexico, eastern Utah, middle Colorado, western Wyoming, Idaho (except the Panhandle) north and east of the Snake River plains, western Montana, and extreme southwestern Alberta (Waterton Lakes National Park\*), and extreme southeastern British Columbia (Elko\*, Newgate\* near the International Boundary east of Kootenay River). (Alta., B.C.)



\***Lepus americanus cascadensis** Nelson. CASCADE MOUNTAINS SNOWSHOE RABBIT. *Lièvre des montagnes Cascades.*

1907. *Lepus bairdi cascadensis* Nelson, Proc. Biol. Soc. Wash., vol. 20, p. 87 (Dec. 11, 1907).

1935. *Lepus americanus cascadensis* Racey and Cowan, Ann. Rept. Prov. Mus. B.C., 1935.

*Type Locality.* Roab's ranch, near Hope, British Columbia, Canada. (Type: M.C.Z., No. 1886.)

*Range.* "The Cascade Mountains of Washington and British Columbia, from Mount Adams, Washington, on the south to Jervis Inlet, British Columbia, on the north (Cowan, MS.); bordered on the west, south of the Fraser River, by the range of *washingtoni*, on the north by the range of *pallidus*, and on the east by the range of *columbiensis* and the eastern Washington desert" (Dalquest, Journ. Mamm., vol. 23, No. 2, 1942, p. 176). Specimens in N.M.C.: Brackendale, Howe Sound\* 4; Chilliwack Lake\* 1; Fairview-Keremeos Summit\*, Similkameen Valley 3; Lillooet\* 2; Skagit\* 1. (B.C.)

\***Lepus americanus columbiensis** Rhoads. BRITISH COLUMBIA SNOWSHOE RABBIT. *Lièvre de la Colombie-Britannique.*

1895. *Lepus americanus columbiensis* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 242 (July 2, 1895).

1942. *Lepus americanus columbiensis* Dalquest, Journ. Mamm., vol. 23, No. 2, pp. 181-182 (May 14, 1942).

*Type Locality.* Vernon, British Columbia, Canada. (Type: Acad. Nat. Sci. Phila. Rhoads Coll., No. 7462.)

*Range.* In north-central Washington from Okanagan Valley (Moulson, Okanagan county) to Ferry county (Danville, near the British Columbia boundary) north to Indianpoint Lake; from Okanagan Valley (Okanagan Landing; Incanep Creek, head\*; Vaseaux Lake\*) east to Jasper and Banff\* National Parks, Alberta; intergrading with *L. a. americanus* in eastern foothills of Rocky Mountains. (Alta., B.C.)

\***Lepus americanus macfarlanei** Merriam. MACKENZIE VARYING HARE. *Lièvre du Mackenzie.*

1900. *Lepus americanus macfarlanei* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 30 (March 14, 1900).

1900. *Lepus saliens* Osgood, North Amer. Fauna, No. 19, p. 39 (Oct. 6, 1900). Caribou Crossing, between Lake Bennett and Lake Tagish, Yukon, Canada. (Type: U.S.N.M., No. 98956.)

1907. *Lepus niediecki* Matschie, Niedieck's Kreuzfahrten im Beringmeer, p. 240. Kasilof Lake, Kenai Peninsula, Alaska. (Not mentioned by Nelson, 1909.)

*Type Locality.* Fort Anderson, near mouth of Anderson River, Mackenzie, Canada. (Type: U.S.N.M., No. 7111/14467.)

*Range.* Wooded parts of Alaska, in upper Yukon region (Canol Road\*) and southwest to Cook Inlet; base of Alaska Peninsula and all of Yukon, western Mackenzie\*, northern British Columbia (Peace River and Alaska Highway\*), and northwestern Alberta (Wood Buffalo Park\*), Canada. Its northern limit coincides with that of the trees. Vertical range, in the Mackenzie River region, from near sea-level up to over 2,000 feet altitude; zonal range, mainly Hudsonian. (Alta., B.C., N.W.T., Y.T.)

\***Lepus americanus pallidus** Cowan. CHILCOTIN SNOWSHOE RABBIT. *Lièvre de la Chilcotin.*

1938. *Lepus americanus pallidus* Cowan, Journ. of Mamm., vol. 19, No. 2, pp. 242-3 (May 12, 1938).

*Type Locality.* Chezacut Lake, Chilcotin River, British Columbia. (Type: Prov. Mus. B.C., No. 4717.)

*Range.* "Central British Columbia, from the Indianpoint Lake region north to Hazelton, and from the Coast Range to the Rockies (Mount Robson). North-



eastern extent of range unknown."—Dalquest, Journ. Mamm., vol. 23, No. 2, 1942, p. 182. Specimens in N.M.C. from Hagensborg\*, Bella Coola River; Kimsquit\*, Dean Channel; Stuie\*; Wistaria\*, near Burns Lake. (B.C.)

**\*Lepus americanus phaeonotus** Allen. MINNESOTA SNOWSHOE RABBIT. *Lièvre du Minnesota*.

1899. *Lepus americanus phaeonotus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 11 (March 4, 1899).

*Type Locality.* Hallock, Kittson county, Minnesota. (Type: A.M.N.H., No. 4491/3505.)

*Range.* Western half of northern peninsula of Michigan, northern Wisconsin, northern Minnesota, and north into extreme western Ontario, and southern Manitoba (Lake of the Woods\*, junction of Antler and Souris Rivers\*, Carberry\*). Vertical range, from about 900 to 2,000 feet in northern peninsula of Michigan; zonal range, Canadian. (Man., Ont.)

**\*Lepus americanus pineus** Dalquest. PANHANDLE SNOWSHOE RABBIT. NORTHERN IDAHO SNOWSHOE RABBIT. *Lièvre d'Idaho nord*.

1942. *Lepus americanus pineus* Dalquest, Journ. Mamm., vol. 23, No. 2, pp. 178-179 (May 14, 1942).

1942. [*Lepus americanus*] *pineus* Dalquest, *nomen nudum*, Bull. Univ. Wash., 6 (Abstracts of Theses), p. 199 (Feb. 28, 1942).

*Type Locality.* Cedar Mountain (Moscow Mountain), Latah county, Idaho. (Type: Univ. Mich. Mus. Zool., No. 53867.)

*Range.* The Panhandle of northern Idaho, and through extreme eastern Washington from Blue Mountains in southeastern Washington north to near the Washington-British Columbia International Boundary in Pend-d'Oreille, Stevens, and Ferry counties west to Kettle River Mountains. Dalquest (1942, op. cit., p. 178) states that "Intergradation takes place between *pineus* and *columbiensis* in the Kettle River Mountains of Washington and the Kootenay Valley of British Columbia. Intergradation takes place between *pineus* and *bairdii* to the east of the Panhandle of Idaho." The N.M.C. has 2 specimens from Rossland\* and 1 from Trail\* in the Columbia Valley near the International Boundary, which are distinctly referable to *pineus*, and 3 from foot of Nelson Range south of Creston\* in Kootenay Valley, 1 being fairly typical *pineus*, and 2 showing evidence of intergradation with *columbiensis*. (B.C.)

**\*Lepus americanus struthopus** Bangs. NOVA SCOTIA VARYING HARE. MARITIME VARYING HARE. *Lièvre de la Nouvelle-Ecosse*.

1898. *Lepus americanus struthopus* Bangs, Proc. Biol. Soc. Wash., vol. 12, p. 81 (March 24, 1898).

*Type Locality.* Digby, Nova Scotia, Canada. (Type: M.C.Z., No. 2025, Bangs coll.)

*Range.* Maine, east of Penobscot River, Nova Scotia\*, New Brunswick\*, eastern Quebec\* (south of lower St. Lawrence and including Magdalen Islands). Not native to Newfoundland, but introduced into Newfoundland from Nova Scotia in 1864 and is now well distributed on the island. Vertical range, from sea-level up to over 2,500 feet altitude in New Brunswick; zonal range, Canadian. In Nova Scotia does not usually change to pure white coat in winter. (N.B., N.S., P.E.I., P.Q., Nfld.)

**\*Lepus americanus virginianus** (Harlan). VIRGINIA SNOWSHOE RABBIT. VARYING HARE. *Lièvre de la Virginie*.

1825. *Lepus virginianus* Harlan, Fauna Americana, p. 196.

1875. [*Lepus americanus*] var. *virginianus* Allen, Proc. Boston Soc. Nat. Hist., vol. 17, p. 431.

1885. *Lepus americanus virginianus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885).

*Type Locality.* Blue Mountains, northeast of Harrisburg, Pennsylvania. (Type: Harlan (op. cit., p. 198) states that "The above description is taken



principally from a prepared specimen in the possession of Mr. C. Bonaparte, and was killed on the Blue Mountains in the state of Pennsylvania." Possibly taken to Europe with other collections made by Charles Lucien Bonaparte, who made extensive American collections at that period.)

*Range.* Mountains of West Virginia and Virginia north through Maryland, Pennsylvania, New York, New Jersey, Delaware, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, most of Maine east to Penobscot River and Mount Katahdin, and parts of southern Quebec lying north of the boundary of western Maine (Megantic county\*) and northern New Hampshire, Vermont, and New York, also southern and eastern Ontario north to the Ottawa River\*, intergrading with *L. a. americanus* in southwestern Quebec\* a short distance north of Ottawa. Vertical range, from sea-level in Rhode Island up to over 4,000 feet in the Adirondacks of New York; zonal range, Canadian. (Ont., P.Q.)

\**Lepus americanus washingtonii* Baird. WASHINGTON SNOWSHOE RABBIT. *Lièvre du Washington*.

1855. *Lepus washingtonii* Baird, Proc. Acad. Nat. Sci. Phila., vol. 7, p. 333.

1885. *Lepus americanus washingtoni* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885).

1895. *L[epus] washingtoni* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 241 (July 2, 1895).

1942. *Lepus americanus washingtoni* Dalquest, Journ. Mamm., vol. 23, No. 2, 1942, pp. 173-175 (May 14, 1942).

*Type Locality.* Steilacoom, Pierce county, Puget Sound, Washington. (Type: U.S.N.M., No. 1223/280.)

*Range.* West of the Cascade Mountains in British Columbia, Washington, and Oregon; south at least to Rogue River, Oregon (Bailey, 1936), north to Fraser River, British Columbia (Chilliwack\*, Cultus Lake\*, Douglas\*, Huntingdon\*, Hastings, Point Grey), and east in the lower Columbia River Valley to White Salmon, Washington. (B.C.)

### Genus *Sylvilagus* Gray<sup>1</sup>

1867. *Sylvilagus* Gray, Ann. and Mag. Nat. Hist., ser. 3, vol. 20, p. 221. Type, *Lepus sylvaticus* Bachman=*L. nuttalli mallurus* Thomas.

#### Subgenus *Sylvilagus* Gray. Cottontails

1897. *Microlagus* Trouessart, Cat. Mamm. viv foss., p. 660. Type, *Lepus cinerascens* Allen.

\**Sylvilagus floridanus mearnsii* (Allen). MEARNS' COTTONTAIL. *Lapin brun à queue blanche*.

1894. *Lepus sylvaticus mearnsii* Allen, Bull. Amer. Mus. Nat. Hist., vol. 6, p. 171 (May 31, 1894).

1904. *Sylvilagus floridanus mearnsi* Lyon, Smiths. Misc. Coll., vol. 45, p. 336 (June 15, 1904).

*Type Locality.* Fort Snelling, Hennepin county, Minnesota. (Type: A.M.N.H., No. 4483/3498.)

*Range.* West of Allegheny Mountains from central New York, central Pennsylvania, western West Virginia, eastern Kentucky, and eastern Tennessee, west through southern Michigan and Wisconsin to southeastern Minnesota, and south through Iowa to Trego county, Kansas, northern Missouri and Illinois, with all of Indiana and Ohio. Vertical range from about 500 feet in western New York to about 2,000 feet altitude in mountains of western Pennsylvania; zonal range mainly upper austral, extending into lower part of transition zone. Probably indigenous in extreme southern Ontario as bones of this species have been found in prehistoric Indian village sites. Recorded from Essex county, Ontario, as early as 1868 or 1870, and common in Toronto region 1886-1890;

<sup>1</sup>Revised by Nelson, The Rabbits of North America, North Amer. Fauna, No. 29, pp. 159-275 (Aug. 31, 1909); See also Anderson (1940) The Spread of Cottontail Rabbits in Canada, Can. Field-Nat., vol. 54, No. 5, pp. 70-72 (June 10, 1940).



common around Kingston in 1925, and first specimen taken in Ottawa in 1931, becoming common the following year, but has not penetrated very far into the Laurentian Hills on the Quebec side of Ottawa River. This species became common around Montreal about the same time, but it is not known whether they came in by spreading along the St. Lawrence River from Ontario, or whether they spread from a large planting of cottontails on west side of Lake Champlain in northeastern New York. (Ont., P.Q.)

**\**Sylvilagus floridanus similis* Nelson.** NEBRASKA COTTONTAIL. *Lapin brun du Nebraska.*

1907. *Sylvilagus floridanus similis* Nelson, Proc. Biol. Soc. Wash., vol. 20, p. 82 (July 22, 1907).

*Type Locality.* Valentine, Cherry county, Nebraska. (Type: U.S.N.M., No. 69517.)

*Range.* Dry plains (mainly along wooded streams) of extreme western Minnesota, eastern North and South Dakota, all of Nebraska (except possibly the Missouri bottom lands), northern Kansas, northeastern Colorado, along tributaries of Platte River to base of mountains near Denver, and southeastern Wyoming. Vertical range from about 1,500 feet in northeast Nebraska to over 5,000 feet west of Denver, Colorado; zonal range mainly upper Sonoran. According to Bailey (1925) (A Biol. Survey of North Dakota, Mammals, North Amer. Fauna, No. 49, p. 135) this species was not found in North Dakota in 1887, but had reached Larimore in 1900, and Walhalla, near Pembina, close to the Dakota-Manitoba International Boundary in 1912. The first Canadian record was caught 3 miles north of Treesbank, Manitoba, by Stuart Criddle (Can. Field-Nat., 1929, p. 159) and by 1932 had become a pest in nurseries of the Experimental Station at Morden\*. We have no actual records from Saskatchewan, but there seems little reason to doubt that this is the "cottontail" recently reported from parts of southeastern Saskatchewan. (Man., Sask.)

***Sylvilagus nuttallii nuttallii* (Bachman).** WASHINGTON COTTONTAIL. SAGEBRUSH COTTONTAIL. *Lapin brun du Washington.*

1837. *Lepus nuttallii* Bachman, Journ. Acad. Nat. Sci. Phila., vol. 7, p. 345.

1885. *Lepus sylvaticus nuttalli* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 601 (1885). (Part.)

1904. *Sylvilagus nuttallii* Lyon, Smiths. Misc. Coll., vol. 45, p. 323 (June 15, 1904).

*Type Locality.* Vicinity of the junction of Snake and Columbia Rivers, Washington. (Type: Acad. Nat. Sci., Phila., No. 382.)

*Range.* Plains and lower mountain slopes of Columbia River basin in eastern Washington and Oregon; also northeastern California, northwestern Nevada, and western Idaho. Vertical range from about 100 feet on Columbia River to about 3,000 feet altitude near Primeville, Oregon; zonal range mainly upper Sonoran and lower part of transition zone. One Canadian record, male, captured on Anarchist Mountain, Osoyoos, B.C., on July 27, 1939, by F. L. Beebe, field man of the Public Health Department. Specimen in Provincial Museum, Victoria. Another specimen killed the same day, but not preserved (Ian McTaggart Cowan and James Hatter, in *The Murrelet*, vol. 21, No. 1, Jan.-April, 1940, p. 9) "The northern range of this species has long been the arid slopes of the Columbia River basin in eastern Washington, and in recent years it has been reported that the rabbit is slowly extending its range in a northerly direction. Zonally, the Osoyoos region is upper Sonoran so that the appearance of the species in British Columbia involves no adaptation to a new environment. As the area has been fairly well worked by several collectors the capture of this specimen probably represents an actual extension of territory rather than the capture of a rare species present but hitherto undetected." (B.C.)



\**Sylvilagus nuttallii grangeri* (Allen). BLACK HILLS COTTONTAIL. *Lapin brun à queue blanche de Granger*.

1895. *Lepus sylvaticus grangeri* Allen, Bull. Amer. Mus. Nat. Hist., vol. 7, p. 264 (Aug. 21, 1895).

1903. *Lepus [aticinctus] perplicatus* Elliot, Field Columb. Mus., publ. 87, zool. ser., vol. 3, p. 255 (Dec. 1903). Hanopee Canyon, Panamint Mountains, Inyo county, California.

1909. *Sylvilagus nuttallii grangeri* Nelson, North Amer. Fauna, No. 29, p. 204 (Aug. 31, 1909).

*Type Locality*. Hill City, Black Hills, Custer county, South Dakota. (Type: A.M.N.H., No. 9084/7402.)

*Range*. Western South Dakota, most of Montana and Wyoming; most of the sagebrush plains of Idaho (except extreme western and northwestern parts), Nevada (except northwestern corner and low valleys in the south); mountains of middle eastern California from near Mono Lake to Panamint Range; most of Utah, and northwestern Colorado; extends north of the United States into southern Alberta and Saskatchewan, Canada. Zonal range mainly transition and upper half of upper Sonoran zone. Range in southern Alberta from Cardston east to western escarpment of Cypress Hills\*, and north at least to Red Deer Valley (Steveville\*), and in southeastern Saskatchewan from Cypress Hills\* eastward to Eastend\*, Frenchman River\*, Val Marie\*, Lonesome Butte\*, south of Wood Mountain, the most eastern record being a specimen from Waniska coulée at Big Muddy Lake, Saskatchewan. Said to be increasing and spreading in southwestern Saskatchewan since winter of 1931-1932. (Alta., Sask.)

#### Suborder SIMPLICIDENTATA. Rodents Proper

##### Superfamily SCIUROIDAE

##### Family SCIURIDAE<sup>1</sup>

##### Subfamily Sciurinae

##### Genus *Marmota* Blumenbach.<sup>2</sup> Woodchucks

1779. *Marmota* Blumenbach, Handb. f. Naturgesch., vol. 1, p. 79. Type, *Mus marmota* Linnaeus.

##### *monax* group. Woodchucks

\**Marmota monax canadensis* (Erxleben). CANADA WOODCHUCK. GROUNDHOG. *Marmotte du Canada*.

1777. [*Glis*] *canadensis* Erxleben, Syst. Regni Anim., vol. 1, p. 363. Based primarily on the Quebec Marmot of Pennant.

1778. *Mus empetra* Pallas, Nov. Sp. Quadr. Glir. Ord., p. 75. Based primarily on the Quebec Marmot of Pennant.

1898. *Arctomys monax canadensis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 10, p. 456 (Nov. 10, 1898).

1904. [*Marmota monax*] *canadensis* Trouessart, Catal. Mamm. viv. foss., suppl., p. 344.

*Type Locality*. "Canada et ad fretum Hudsonis." Fixed by Howell (North Amer. Fauna, No. 37, p. 31 (April 7, 1915)) as Quebec, Quebec, Canada.

*Range*. Greater part of interior of Canada, from Simpson, Liard, and Great Slave Lake in Mackenzie district, Cumberland House, Saskatchewan, and York Factory, Manitoba, south through central Alberta and Manitoba to northern Minnesota, northern Wisconsin, northern Michigan, and central Ontario (north of Ottawa River, intergrading to some extent with *rufescens* on Quebec side of Ottawa River), southeastern Quebec, New Brunswick, and Nova Scotia.

<sup>1</sup>Revised by Howell, A. H., Revision of the North American Ground Squirrels with a Classification of the North American Sciuridae; North Amer. Fauna, No. 56, pp. 1-256 (April 1938).

<sup>2</sup>Revised by Howell, A. H., Revision of the North American Marmots; North Amer. Fauna, No. 37, pp. 1-80, Pls. 15 (April 7, 1915).



Presumed to intergrade with *ignava* on north shore of Gulf of St. Lawrence, and with *johnsoni* west of Gaspé Peninsula. (Alta., Man., N.W.T., N.B., N.S., Ont., Sask., P.Q.).

**\*Marmota monax ignava** (Bangs). LABRADOR WOODCHUCK. *Marmotte du Labrador*.

1899. *Arctomys ignavus* Bangs, Proc. New England Zool. Club., vol. 1, p. 13 (Feb. 28, 1899).

1904. (*Marmota monax*) *ignavus* Trouessart, Catal. Mamm., viv. foss. suppl., p. 344.

1924. *Marmota monax ignava* Howell, North Amer. Fauna, No. 37, p. 29 (April 7, 1915).

*Type Locality.* Black Bay, Strait of Belle Isle, Labrador, Canada. (Type: M.C.Z., No. B7971.)

*Range.* Known only from vicinity of type locality; probably north to Hamilton Inlet. Known definitely only from Black Bay region and L'Anse Eclair on north side of Strait of Belle Isle. Woodchucks reported to occur near Northwest River post on Hamilton Inlet by Strong (1930, Journ. Mamm., p. 8) and by Low (1888, p. 79J) from Fort George, Ungava Bay, are presumably referable to *ignava*. (Labr., P.Q.)

**†\*Marmota monax johnsoni** Anderson. GASPE WOODCHUCK. *Marmotte de Gaspé*.

1943. *Marmota monax johnsoni* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, 1942, pp. 53-55 (Sept. 7, 1943).

*Type Locality.* Percé, Gaspé county, Quebec, Canada. Collected by Claude E. Johnson, June 19, 1915. (Type: N.M.C., No. 2473.)

*Range.* Gaspé Peninsula, Quebec; from near sea-level at Percé up to 1,500 feet in upper branches of Grand Casapedia River. (Berry Mountain Brook\*, Federal mine\*, Mount Lyall\*, near foot; Percé\*). (P.Q.)

**\*Marmota monax ochracea** Swarth. OCHRACEOUS WOODCHUCK. *Marmotte jaunâtre*.

1911. *Marmota ochracea* Swarth, Univ. Calif. Publ. Zool., vol. 7, p. 203 (Feb. 18, 1911).

1915. *Marmota monax ochracea* Howell, North Amer. Fauna, No. 37, p. 34 (April 7, 1915).

*Type Locality.* Fortymile Creek, Alaska. (Type: M.V.Z., No. 5872.)

*Range.* West of the continental divide in northern British Columbia (Liard River\*) and southern Yukon from Babine Mountains, Takla Lake, and Atkin; Teslin Lake\*, Yukon, north to Fortymile Creek, in eastern Alaska. (B.C., Y.T.)

**‡\*Marmota monax petrensis** Howell. BRITISH COLUMBIA BROWN WOODCHUCK. *Marmotte brune de la Colombie-Britannique*.

1915. *Marmota monax petrensis* Howell, North Amer. Fauna, No. 37, p. 33 (April 7, 1915).

*Type Locality.* Revelstoke, British Columbia, Canada. (Type: U.S.N.M., No. 203532; orig. No. 170, Wm. Spreadborough, N.M.C., No. 240. Melanistic topotype in N.M.C. collection, No. 239.)

*Range.* Interior ranges of southern British Columbia and adjacent parts of United States, from Barkerville, British Columbia, south to Thompson Pass, Idaho. (B.C.)

**\*Marmota monax rufescens** Howell. RUFESCENT WOODCHUCK. *Marmotte rougeâtre*.

1914. *Marmota monax rufescens* Howell, Proc. Biol. Soc. Wash., vol. 27, p. 13 (Feb. 2, 1914).

*Type Locality.* Elk River, Sherburne county, Minnesota. (Type: U.S.N.M., No. 186521.)

*Range.* Eastern North Dakota, central and southern Minnesota, Wisconsin, and Michigan, southern Ontario, north to Ottawa River, intergrading to some extent with *M. c. canadensis* on the Quebec side of the river near Ottawa; greater part of New York (including Long Island), and higher parts of western Massachusetts. (Ont., P.Q.)



*flaviventris* group. Yellow-bellied Marmots

\***Marmota flaviventris avara** (Bangs). PALE YELLOW-BELLIED MARMOT. *Pâle siffleur à ventre jaune.*

1899. *Arctomys flaviventer avarus* Bangs, Proc. New England Zool. Club, vol. 1, p. 68 (July 31, 1899).

1904. [*Marmota flaviventer*] *avarus* Trouessart, Catal. Mamm. viv. foss., suppl., p. 344.

1924. *Marmota flaviventris avara* Howell, North Amer. Fauna, No. 37, p. 41 (April 7, 1915).

*Type Locality.* Okanagan, British Columbia, Canada. (Type: M.C.Z., No. B7971.)

*Range.* Interior valleys and foothills of southern British Columbia and eastern Washington and Oregon. Common in Columbia River Valley as far north as Rossland\* and Trail\*, throughout the Okanagan Valley, on North Thompson River some distance north of Kamloops, and on Fraser River to Hope\* and Williams Lake. (B.C.)

*caligata* group. Hoary Marmots, Whistlers, Siffleurs<sup>1</sup>

\***Marmota caligata caligata** (Eschscholtz). NORTHERN HOARY MARMOT. *Siffleur cendré du Nord.*

1829. *Arctomys caligatus* Eschscholtz, Zool. Atlas, pt. 2, p. 1, Pl. 6.

1885. *Arctomys pruinosus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 593 (1885). (Not of Gmelin.)

1888. *Arctomys caligatus* Tyrrell, Proc. Can. Inst., Toronto, ser. 3, vol. 6, p. 88 (Oct. 1888).

1903. *Marmotta caligata* Allen, Bull. Amer. Mus. Nat. Hist., vol. 19, p. 539 (Oct. 10, 1903).

1915. *Marmota caligata caligata* Howell, North Amer. Fauna, No. 27, p. 59 (Feb. 2, 1914).

*Type Locality.* Near Bristol Bay, Alaska. (Type not known.)

*Range.* Alaska and Yukon, from Portland Canal north on the coast to Bristol Bay, and in the interior to the Endicott Range and the mountains lying westward of Fort Good Hope, Mackenzie. (It is quite possible that *Marmota caligata broweri* Hall (1934) may occupy the Endicott (Brooks) Range in Alaska and the Richardson Mountains in Arctic Yukon; the writer has seen skins from Endicott Mountains, but no scientific specimens have been brought out.) (B.C., N.W.T., Y.T.)

\***Marmota caligata cascadiensis** Howell. CASCADE HOARY MARMOT. *Siffleur des montagnes Cascades.*

1914. *Marmota caligata cascadiensis* Howell, Proc. Biol. Soc. Wash., vol. 27, p. 17 (Feb. 2, 1914).

*Type Locality.* Mount Rainier, Pierce county, Washington. (Type: U.S.N.M., No. 90134.)

*Range.* Cascade Range (at and above timberline) from Mount Rainier, Washington, north to southern British Columbia (Mount Baker Range, near U.S. boundary); north to Howe Sound (a little north of Vancouver); intergrading with *okanagan* on east side of Cascade Mountains (Spences Bridge). (B.C.)

\***Marmota caligata nivaria** Howell. MONTANA HOARY MARMOT. *Siffleur du Montana.*

1914. *Marmota caligata nivaria* Howell, Proc. Biol. Soc. Wash., vol. 27, p. 17 (Feb. 2, 1914).

*Type Locality.* Mountains near Upper St. Mary's Lake, Teton county, Montana. Altitude, 6,100 feet. (Type: U.S.N.M., No. 72235.)

*Range.* Upper slopes (at and above timberline) of high mountains of northwestern Montana and of Bitterroot and Salmon River Mountains, Idaho; north in small numbers to Waterton Lakes National Park; one specimen, from Mount Forgetmenot\*, about 40 miles southwest of Calgary, Alberta, and Banff\* National

<sup>1</sup>See Anderson, R. M.: Notes on the Distribution of the Hoary Marmots; Can. Field-Nat., vol. 48, No. 4, pp. 60-63, 1 map (April 1934).



Park where it intergrades with *M. c. oxytona*. Crowe (1943, p. 397) refers specimens from Tornado Pass (7,000 feet), Monarch Mountain, and Farrow Pass, 5½ miles northwest of Mount Assiniboine, on the British Columbia side, to *nivaria*, all much more white than either *okanagan* or *oxytona*, and with skulls closely resembling *oxytona*. (Alta., B.C.)

**\**Marmota caligata okanagan* (King).** OKANAGAN HOARY MARMOT. *Siffleux du Okanagan*.

1836. *Arctomys okanaganus* King, Narr. Journ. Shores Arctic Ocean, vol. 2, p. 236.

1914. (*Marmota*) *okanagan* Howell, Proc. Biol. Soc. Wash., vol. 27, p. 17 (Feb. 2, 1914).

1915. *Marmota caligata okanagan* Howell, North Amer. Fauna, No. 37, p. 64 (April 7, 1915).

**Type Locality.** The region occupied by the Okanagan Indians on the borders of the Rocky Mountains between Columbia and Fraser Rivers. Fixed by Howell (Proc. Biol. Soc. Wash., vol. 27, p. 17 (Feb. 2, 1914)) as Gold Range, British Columbia, Canada. (Type: Br. M., No. 55.12.24.126.)

**Range.** Gold and Selkirk Ranges, British Columbia, and probably main range of the Rocky Mountains in Alberta from Banff to Henry House; exact limits unknown. Mountains of southern interior of British Columbia from McGillivray Creek\* near Lillooet, east through Shuswap and Monashee\* Ranges, and Selkirk Mountains. South to extreme northeastern Washington in Columbia Valley. (B.C.)

**\**Marmota caligata oxytona* Hollister.** ROCKY MOUNTAIN HOARY MARMOT. ROBSON HOARY MARMOT. *Siffleux des Rocheuses*.

1912. *Marmota sibila* Hollister, Smiths. Misc. Coll., vol. 56, No. 35, p. 1 (Feb. 7, 1912). (Not *Arctomys sibila* Wolf, 1808.)

1914. *Marmota oxytona* Hollister, Science, n.s., vol. 39, p. 251 (Feb. 13, 1914).

1915. *Marmota caligata oxytona* Howell, North Amer. Fauna, No. 37, p. 63 (April 7, 1915). (Substitute for *sibila* Hollister.)

**Type Locality.** Head of Moose Pass branch of Smoky River, Alberta, Canada. Altitude, 7,200 feet. (Type: U.S.N.M., No. 174503.)

**Range.** Interior of northern British Columbia, southwestern Mackenzie, and southern Yukon, from Teslin Lake and Liard River south to Barkerville, British Columbia, and the Mount Robson region, British Columbia and Alberta, intergrading with *M. c. nivaria* in Banff National Park\*. (Alta., B.C., N.W.T., Y.T.)

**†*Marmota caligata raceyi* Anderson.** CHILCOTIN HOARY MARMOT. *Siffleux du Chilcotin*.

1932. *Marmota caligata raceyi* Anderson, Nat. Mus. Canada, Ann. Rept. 1931, pp. 112-119 (Dec. 20, 1932).

**Type Locality.** Itcha Mountains, Chilcotin plateau, south of Isacha Lake, range III, Coast district, British Columbia; latitude 52° 45' north, longitude 125° west; altitude, 6,500 feet. (Type: N.M.C., No. 11430.)

**Range.** From Chilcotin plateau between middle Fraser River and Coast Mountains, west to upper Bella Coola Valley, British Columbia. Nineteen specimens examined from Itcha Mountains\*, Wistaria\* (near Burns Lake, about 120 miles north of the type locality); Caribou Mountains\* (near Stuie, 6,000 feet), and Mount Brilliant\* (Rainbow Mountains, 5,500 feet), about 70 miles west of the type locality. (B.C.)

**\**Marmota vancouverensis* Swarth.** VANCOUVER ISLAND MARMOT. *Siffleux de l'île de Vancouver*.

1911. *Marmota vancouverensis* Swarth, Univ. Calif. Publ. Zool., vol. 7, p. 201 (Feb. 18, 1911).

**Type Locality.** Mount Douglas, Vancouver Island, British Columbia, Canada. (Type: M.V.Z., No. 12094.)

**Range.** Vancouver Island, British Columbia. An aberrant dark brown species known only from southern parts of Vancouver Island, British Columbia.



Apparently not generally distributed. Swarth (1912, Mammals and Birds from Vancouver Island; Univ. Calif. Publ. Zool., vol. 10, p. 89) found them only in "mountains at head of China Creek, some twenty miles south of Alberni, in the Golden Eagle Basin, and King Solomon Basin, and on the surrounding slopes and ridges." The known range was extended farther east in 1931 by Kenneth Racey who obtained five specimens from Green Mountain\* on Nanaimo River, and one specimen was taken in 1929 by Arthur Peake on Battle Mountain\*. (B.C.)

Genus *Citellus* Oken. Ground Squirrels<sup>1</sup>

1816. *Citellus* Oken, Lehrbuch der Zoologie, pt. 3, vol. 2, p. 842. Type, *Mus citellus* Linnaeus.

Subgenus *Citellus* Oken

*richardsonii* group

\**Citellus richardsonii richardsonii* (Sabine). RICHARDSON'S GROUND SQUIRREL. "FLICKER-TAIL." *Ecureuil de terre de Richardson*.

1822. *Arctomys richardsonii* Sabine, Trans. Linn. Soc., vol. 13, p. 589.

1885. *Spermophilus richardsoni richardsoni* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 594 (1885).

1904. [*Citellus*] *richardsoni* Trouessart, Catal. Mamm. viv. foss., suppl., p. 338.

1938. *Citellus richardsonii richardsonii* Howell, North Amer. Fauna, No. 56, p. 73 (April 1938).

*Type Locality.* Carlton House, Saskatchewan, Canada. (Lectotype, selected by O. Thomas, 1927, p. 545; Br. Mus., No. 63a, coll. by Sir John Richardson.)

*Range.* Plains of southern Alberta\*, southern Saskatchewan\*, and southwestern Manitoba\*; north to North Saskatchewan River; east to Red River, North Dakota, Big Stone Lake, South Dakota, and the western edge of Minnesota; south to east-central South Dakota (Jerauld county), and southwestern Montana (Gallatin and Park counties) west to foothills of the Rocky Mountains in Alberta and Montana. (Alta., Man., Sask.)

*parryi* group

\**Citellus columbianus columbianus* (Ord). COLUMBIAN GROUND SQUIRREL. PICKET-PIN. *Ecureuil de terre de la Colombie-Britannique*.

1815. *Arctomys columbianus* Ord, Guthrie's Geography, 2d Am. ed., vol. 2, p. 292; described on p. 303.

1829. *Arctomys parryi* var. *erythrogluteia* Richardson, Fauna Boreali-Americana, vol. 1, p. 161. "Rocky Mountains, near the sources of the Elk River"—Wolf Plain, 30 miles west of Rock Lake, Alberta.

1877. *Spermophilus empetra* var. *erythroglutaeus* Allen, Monogr. North Amer. Rodentia, p. 839 (1877). (Part.)

1891. *Spermophilus columbianus* Merriam, North Amer. Fauna, No. 5, p. 39 (1891).

1903. *Citellus columbianus albertae* Allen, Bull. Amer. Mus. Nat. Hist., vol. 19, p. 537 (Oct. 10, 1903). Canadian National Park (Banff), Alberta, Canada.

1912. *Citellus columbianus columbianus* Miller, List North Amer. Land Mamm., 1911, p. 296 (Dec. 31, 1912).

*Type Locality.* Camas prairie between the forks of the Clearwater or Kooskooskie, about 40 miles from Moscow, Lincoln county, Idaho. (See Merriam, North Amer. Fauna, No. 5, p. 41 (July 30, 1891). No type designated; original description based on Lewis and Clark's description of animals taken by them.)

*Range.* Southeastern British Columbia\*, west to Okanagan Lake and Shuswap Lake and headwaters of Shuswap River, north to headwaters of South Pine River and mountains on east side of lower Parsnip River; in Alberta on

<sup>1</sup>Revised by Howell, A. H., Revision of the North American Ground Squirrels, with a Classification of the North American Squirrels; North Amer. Fauna, No. 56, pp. 1-256, figs. (maps) 20, pls. 32 (May 18, 1938).



eastern slopes of Rocky Mountains from International Boundary (Waterton Lakes National Park\*), north at least to Smoky River Valley 50 miles north of Jasper; south through eastern Washington, northeastern Oregon (Harney county), northern and central Idaho, and western Montana to eastern foothills of Rocky Mountains. (Alta., B.C.)

\***Citellus parryii parryii** (Richardson). **PARRY'S GROUND SQUIRREL. ARCTIC GROUND SQUIRREL.** *Ecureuil de terre d'Arctique.*

1825. *Arctomys parryii* Richardson, Appendix to Parry's second voyage, p. 316.  
 1829. *Arctomys parryi* var. *phaeognatha* Richardson, Fauna Boreali-Americana, vol. 1, p. 158. Hudson Bay.  
 1861. *A[rctomys] kennicottii* Ross, Can. Nat. and Geol., vol. 6, p. 434. Fort Good Hope, Mackenzie district, Northwest Territories.  
 1885. *Spermophilus empetra empetra* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 594 (1885).  
 1902. *Spermophilus parryi* Preble, North Amer. Fauna, No. 22, p. 46 (Oct. 31, 1902).  
 1903. *Citellus parryii* Miller and Rehn, Proc. Boston Soc. Nat. Hist., vol. 31, p. 75 (Aug. 24, 1903).  
 1912. *Citellus parryii parryii* Miller, List North Amer. Land Mamm., 1911, p. 301 (Dec. 31, 1912).

*Type Locality.* Five Hawser Bay, Lyon Inlet, Melville Peninsula, Canada. (Type: none designated.)

*Range.* Barren Grounds of northern Canada from Melville Peninsula, and western shores of Hudson Bay south to a point about 25 miles south of Cape Eskimo, Hudson Bay; west to Artillery Lake, Mackenzie district, and northwest to Great Bear Lake and Rampart House on Alaska-Yukon boundary; south to Canol Road, Mile 45E\* and Sekwi River\*, east slope of Mackenzie Mountains in Northwest Territories. One doubtful record from west side of James Bay, Ontario, latitude 53° N., longitude 83° W.\* (N.W.T., Y.T.)

\***Citellus plesius plesius** (Osgood). **YUKON GROUND SQUIRREL.** *Ecureuil de terre du Yukon.*

1900. *Spermophilus empetra plesius* Osgood, North Amer. Fauna, No. 19, p. 29 (Oct. 6, 1900).  
 1903. *C[itellus] plesius* Osgood, Proc. Biol. Soc. Wash., vol. 16, p. 25 (March 19, 1903).  
 1912. *Citellus plesius plesius* Miller, List North Amer. Land Mamm., 1911, p. 302 (Dec. 31, 1912).  
 1938. *Citellus parryii plesius* Howell, North Amer. Fauna, No. 56, p. 97 (May 18, 1938).

*Type Locality.* Bennett City, head of Lake Bennett, British Columbia, Canada. (Type: U.S.N.M., No. 98931.)

*Range.* Northwestern British Columbia, greater part of Yukon (except extreme northern part), Canol Road (Rose River, Mile 95\*; Lapie Lake, Mile 105; Lapie River, Mile 132\*; Sheldon Lake, Mile 222\*; Macmillan River, Miles 190\* and 282\*); north to the Ogilvie Range (head of Coal Creek), Yukon; east to Fort Liard and Nahanni Mountains, Mackenzie; south to vicinity of Tatletuey Lake, British Columbia; west to White Pass, British Columbia, and Delta River (Ober Creek), Alaska, where it intergrades with *C. p. ablusus*. Zonal range: Hudsonian. (B.C., N.W.T., Y.T.)

#### Subgenus *Ictidomys* Allen

1877. *Ictidomys* Allen, Monog. North Amer. Rodentia, p. 821. Type, *Sciurus tridecemlineatus* Mitchill.

#### *tridecemlineatus* group

\***Citellus tridecemlineatus tridecemlineatus** (Mitchill). **THIRTEEN-STRIPED GROUND SQUIRREL.** *Ecureuil de terre rayé. Gausfre rayé.*

1821. *Sciurus tridecem-lineatus* Mitchill, Med. Repos., n.s., vol. 6 (21), p. 248.  
 1885. *Spermophilus tridecimlineatus tridecemlineatus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 594 (1885).  
 1904. [*Citellus*] *tridecemlineatus* Trouessart, Catal. Mamm. viv. foss., suppl., p. 341.  
 1938. *Citellus tridecemlineatus tridecemlineatus* Howell, North Amer. Fauna, No. 56, p. 107 (April 1938).

*Type Locality.* Central Minnesota. (See Allen, Bull. Amer. Mus. Nat. Hist., vol. 7, p. 338 (Nov. 8, 1895).) No type designated.



*Range.* Parts of southern Alberta\*, Saskatchewan\*, and Manitoba\*; north to Athabaska Landing, Alberta, and west to Red Deer; northeastern Montana; eastern parts of North Dakota, South Dakota, and Nebraska; northeastern Kansas; northern Missouri; all of Iowa; most of Minnesota and Wisconsin; lower peninsula of Michigan; northern parts of Illinois and Indiana, and southwestern Ohio; north to Athabaska Landing, Alberta; east to Fairfield county, Ohio; south to central Kansas; west to Red Deer, Alberta, and St. Mary Lake, Mont. Zonal range: Transition and Upper Austral (Howell). (Alta., Man., Sask.)

\**Citellus tridecemlineatus hoodii* (Sabine). NORTHERN THIRTEEN-STRIPED GROUND SQUIRREL. *Ecureuil de terre rayé du Nord*.

1822. *Arctomys hoodii* Sabine, Linn. Soc. London, Trans., vol. 13, p. 590.

1938. *Citellus tridecemlineatus tridecemlineatus* Howell, North Amer. Fauna, No. 56, p. 107 (May 18, 1938).

*Type Locality.* Carlton House (now Carlton), southwest of Prince Albert, Saskatchewan.

*Range.* Through west-central Manitoba from Riding Mountains and Swan River northwest through central Saskatchewan to Prince Albert National Park, Saskatchewan. (Man., Sask.)

\**Citellus tridecemlineatus pallidus* (Allen). PALE STRIPED GROUND SQUIRREL. *Pâle ecureuil rayé*.

1877. [*Spermophilus tridecemlineatus*] var. *pallidus* Allen, Monogr. North Amer. Rodentia, p. 872 (Aug. 1877).

1885. *Spermophilus tridecemlineatus pallidus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 594 (1885).

1904. [*Citellus tridecemlineatus*] *pallidus* Trouessart, Catal. Mamm. viv. foss., suppl., p. 341.

1938. *Citellus tridecemlineatus pallidus* Miller, List North Amer. Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 305 (Dec. 31, 1912).

*Type Locality.* Plains of the lower Yellowstone River, Montana. (See Allen, Bull. Amer. Mus. Nat. Hist., vol. 7, p. 338 (Nov. 1895).) (Type: U.S.N.M., No. 16237.)

*Range.* Plains of Montana east of the Rocky Mountains, eastern Wyoming, northeastern Colorado; east to Missouri River in North Dakota and to about the 100th meridian in Nebraska and Kansas; reaches northern limit in Canada, through the drier parts of southwestern Saskatchewan (Cypress Hills\*), and extreme southern parts of Alberta to edge of foothills of Rocky Mountains (Waterton Lakes National Park\*). (Alta., Sask.)

#### Subgenus *Poliocitellus* A. H. Howell

1938. *Poliocitellus* A. H. Howell, North Amer. Fauna, No. 56, p. 42. Type, *Arctomys franklinii* Sabine.

\**Citellus franklinii* (Sabine). FRANKLIN'S GROUND SQUIRREL. GRAY GROUND SQUIRREL. BRUSH GOPHER. *Ecureuil gris de Franklin*. *Gaufre gris*.

1822. *Arctomys franklinii* Sabine, Trans. Linn. Soc., vol. 13, p. 587.

1885. *Spermophilus franklini* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 504 (1885).

1904. [*Citellus*] *franklini* Trouessart, Catal. Mamm. viv. foss., suppl., p. 342.

1938. *Citellus franklinii* Howell, North Amer. Fauna, No. 56, p. 133 (May 18, 1938).

*Type Locality.* Vicinity of Carlton House, Saskatchewan, Canada. (See Preble, North Amer. Fauna, No. 27, p. 165 (Oct. 26, 1908).)

*Range.* Great Plains region of southern Canada, north to Athabaska Landing, Alberta, Prince Albert National Park, Saskatchewan, and Lake Winnipeg, Manitoba; east to Emo and Rainy River in extreme southwestern Ontario; in the Great Plains region of United States west to Missouri Valley in North Dakota and south Dakota, central Nebraska, and central Kansas;



southwestern Minnesota, Iowa, northern Missouri, southwestern Wisconsin, northern Illinois, and northwestern Indiana. Zonal range: Transition and Upper Austral. (Alta., Man., Ont., Sask.)

### Subgenus *Callospermophilus* Merriam

1897. *Callospermophilus* Merriam, Biol. Soc. Wash., Proc., vol. 11, p. 189 (July 1, 1897). Type, *Sciurus lateralis* Say.

\**Citellus lateralis tescorum* Hollister. HOLLISTER'S MANTLED GROUND SQUIRREL. *Ecureuil à manteau de Hollister*.

1911. *Callospermophilus lateralis tescorum* Hollister, Smith. Misc. Coll., vol. 56, No. 26, p. 2 (Dec. 5, 1911).

1938. *Citellus lateralis tescorum* Howell, North Amer. Fauna, No. 56, p. 199 (May 18, 1938).

*Type Locality.* Head of Moose Pass branch of Smoky River, Alberta, Canada (near Moose Pass, British Columbia). Altitude, 7,000 feet. (Type: U.S.N.M., No. 174165.)

*Range.* Northern Rocky Mountain region in western Alberta, Waterton Lakes\*, Banff\*, and Jasper\* National Parks, north to Wapiti (coll. by J. V. Butterworth, 1944) River; eastern British Columbia, northern and central Idaho, and western Montana; north to Mount Selwyn, British Columbia; south to Edna and Ketchum, Idaho; west to the Columbia River Valley (Rossland\*, Trail\*, Green Mountain\*, Old Glory Mountain\*), southeastern British Columbia. Zonal range: Canadian and Hudsonian. (Alta., B.C.)

\**Citellus saturatus* (Rhoads). CASCADE MANTLED GROUND SQUIRREL. *Ecureuil à manteau sombre*.

1895. *Tamias lateralis saturatus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 43 (April 9, 1895).

1912. *Callospermophilus lateralis saturatus* Miller, North Amer. Land Mamm., 1911, p. 316 (Dec. 31, 1912).

1938. *Citellus saturatus* Howell, North Amer. Fauna, No. 56, pp. 212-3 (May 18, 1938).

*Type Locality.* Lake Keechelus, Kittitas county, Washington. (Type: Acad. Nat. Sci. Phila., No. 8365.)

*Range.* "The Cascade Mountain region of western Washington and southern British Columbia; north to Tulameen, British Columbia; south to the Columbia River Valley, southern Washington; east to the Similkameen River\*, British Columbia" (Howell). (B.C.)

### Genus *Cynomys* Rafinesque.<sup>1</sup> Prairie Dogs

1817. *Cynomys* Rafinesque, Amer. Monthly Mag., vol. 2, p. 45 (Nov. 1817). Type, *Cynomys socialis* Rafinesque=*Arctomys ludoviciana* Ord.

### Subgenus *Cynomys* Rafinesque

\**Cynomys ludovicianus ludovicianus* (Ord). BLACK-TAILED PRAIRIE DOG. *Marmotte des prairies*. *Chien des prairies*.

1815. *Arctomys ludoviciana* Ord, Guthrie's Geography, 2nd Amer. ed., vol. 2, p. 292. Description on page 302.

1857. *Cynomys ludovicianus* Baird, Mamm. North Amer., p. xxv.

1905. *Cynomys pyrrhotrichus* Elliot, Proc. Biol. Soc. Wash., vol. 18, p. 139 (April 18, 1905). White Horse Spring, Woods county, Oklahoma.

1912. *Cynomys ludovicianus ludovicianus* Hollister, North Amer. Fauna, No. 40, p. 14 (June 1916).

*Type Locality.* Upper Missouri River ("Vicinity of the Missouri, and through the greater part of Louisiana"). (No type designated.)

*Range.* Great Plains region of western United States, from west-central Texas and extreme eastern New Mexico east to about the 97th meridian in

<sup>1</sup>Revised by Hollister, a Systematic Account of the Prairie-dogs; North Amer. Fauna, No. 40, p. 38, figs. (maps) 2, pls. 7 (June 20, 1916).



Oklahoma, Kansas, and Nebraska; west to the Rocky Mountains in New Mexico, Colorado, Wyoming, and central Montana, reaching northern limit in southwestern Saskatchewan, where at least one large colony and a few smaller colonies are found in the vicinity of Val Marie\*, along Frenchman River, a tributary of Milk River, near the Montana boundary. There are hearsay records of a few prairie dogs near Many Islands Lake west of the Saskatchewan-Alberta boundary about 1894, and near the Montana border south of Medicine Hat, but none is known to occur in Alberta at present. (Sask.)

Genus *Tamias* Illiger. Eastern Chipmunks<sup>1</sup>

1811. *Tamias* Illiger, Prodr. Syst. Mam. et Avium, p. 83. Type, *Sciurus striatus* Linnaeus.

\**Tamias striatus griseus* Mearns. GRAY EASTERN CHIPMUNK. *Suisse gris*.

1891. *Tamias striatus griseus* Mearns, Bull. Amer. Mus. Nat. Hist., vol. 3, p. 231 (June 5, 1891).

*Type Locality.* Fort Snelling, Hennepin county, Minnesota. (Type: A.M.N.H., No. 2196.)

*Range.* Upper Mississippi Valley region, from southeastern Missouri and southern Illinois east to Lake Michigan and eastern Indiana; in Canada from southwestern Manitoba (Aweme, Riding Mountains, Shoal Lake\*, Winnipeg) through western and northern Ontario along north side of Lake Superior\* to south end of James Bay; in Quebec north to head of Mattagami Lake and Woswonabi Lake\*, and east on north shore of Gulf of St. Lawrence to head of Matamek River; intergrading with *lysteri* north of Georgian Bay region, and north of Ottawa\* and St. Lawrence Rivers and in parts of Gaspé Peninsula\*. (Man., Ont., P.Q.)

*Tamias striatus lysteri* (Richardson). NORTHEASTERN CHIPMUNK. *Suisse rayé du nord-est*.

1829. *Sciurus (Tamias) lysteri* Richardson, Fauna Boreali-Americana, vol. 1, p. 181.

1886. *Tamias striatus lysteri* Merriam, Amer. Nat., vol. 20, p. 242 (March 1886).

*Type Locality.* Penetanguishene, Georgian Bay, Ontario, Canada. (Type: Not designated by number.)

*Range.* Southern and central Ontario to north end of Georgian Bay and Algonquin Park; southern Quebec, intergrading with *griseus* about 70 miles north of Ottawa\* and St. Lawrence Rivers, and in parts of Gaspé Peninsula\*; east to Murray Bay; east and south in all parts of the Maritime Provinces, including Cape Breton Island\*; New England, New York (except southern part), south to Ann Arbor, Michigan, and in higher Alleghenies to western Maryland, and west to extreme northwestern Wisconsin. (N.B., N.S., Ont., P.E.I., P.Q.)

Genus *Eutamias* Trouessart.<sup>2</sup> Western Chipmunks

1880. *Eutamias* Trouessart, Bull. Soc. d'Etudes Sci. d'Angers, vol. 10, fasc. 1, p. 86. Type, *Sciurus striatus asiaticus* Gmelin. (See Allen, Abstract Proc. Linn. Soc. New York, 1893-94, p. 42 (July 20, 1894).)

*minimus* group

\**Eutamias minimus borealis* (Allen). NORTHERN INTERIOR CHIPMUNK. *Suisse du Nord*.

1877. *Tamias asiaticus borealis* Allen, Monogr. N. Amer. Rodentia, p. 793 (Aug. 1877).

1922. *Eutamias minimus borealis* Howell, Journ. Mamm., vol. 3, p. 183 (Aug. 4, 1922).

*Type Locality.* Fort Liard, district of Mackenzie, Northwest Territories, Canada. (Type: U.S.N.M., No. 6506; lectotype.)

<sup>1</sup>Revised by Howell, Arthur H., Revision of the American Chipmunks (genera *Tamias* and *Eutamias*); North Amer. Fauna, No. 52, pp. 157, pls. 10, figs. (distribution maps) 9 (Nov. 1929). (*Tamias*, pp. 11-23.)

<sup>2</sup>Arranged in accordance with the classification adopted by Howell. "Revision of the American Chipmunks (Genera *Tamias* and *Eutamias*)"; North Amer. Fauna, No. 52, pp. 1-157 (Nov. 1929). See also Anderson and Rand, Notes on Chipmunks of the Genus *Eutamias* in Canada; Can. Field-Nat., 57: 7-8, Oct.-Nov. 1943, pp. 133-135 (Jan. 24, 1944).



*Range.* Interior Canada, from southern Mackenzie (Simpson and Great Slave Lake) south over northeastern British Columbia\* east of the Rocky Mountains, south to Banff\* and Eagle Butte, Alberta, southern Saskatchewan\*, to southeastern Manitoba and northern North Dakota (Turtle Mountains\*); also isolated colonies in Black Hills of South Dakota, Bear Lodge Mountains of Wyoming, and the Big Snowy, Bear Paw, and other ranges in central Montana. (Alta., B.C., Man., N.W.T., Sask.)

\***Eutamias minimus caniceps** Osgood. YUKON CHIPMUNK. GRAY-HEADED CHIPMUNK. *Suisse à tête grise.*

1900. *Eutamias caniceps* Osgood, North Amer. Fauna, No. 19, p. 28 (Oct. 6, 1900).

1922. *Eutamias minimus caniceps* Howell, Journ. Mamm., vol. 3, p. 184 (Aug. 4, 1922).

*Type Locality.* Lake Laberge, Yukon, Canada. (Type: U.S.N.M., No. 99200.)

*Range.* "Southern Yukon, southwestern Mackenzie (district, N.W.T.), and northwestern British Columbia; north to Macmillan River, east to Nahanni River Mountains, south to Ispatseeza River, northern British Columbia, west to Lake Bennett and Lake Laberge; northern limits imperfectly known" (Howell, 1938, p. 58). Specimens in National Museum of Canada from Teslin Lake\*, Canol Road (Nisutlin River, Mile 40\*, Lapie River, Mile 132\*, Sheldon Mountain\*), Yukon, and from western Mackenzie district (Canol Road, Mile 112E\*). (B.C., N.W.T., Y.T.)

†\***Eutamias minimus hudsonius** Anderson and Rand. HUDSON BAY CHIPMUNK. *Suisse de la baie d'Hudson.*

1944. *Eutamias minimus hudsonius* Anderson and Rand, Can. Field-Nat., vol. 57, Nos. 7-8, October-November, 1943, p. 133 (Jan. 24, 1944).

*Type Locality.* Bird (Mile 349), Hudson Bay Railway, northern Manitoba, Canada. (Type: N.M.C., No. 14786.)

*Range.* Known only from northern Manitoba: Bird\*, Herchmer\* (Mile 412), and Thicket Portage\* (Mile 165), H.B. Railway and Alberta Lake\* near Flin Flon (four specimens collected by W. H. Bryenton in 1943); intergrading with *E. m. borealis* in the vicinity of The Pas, in western Manitoba; probably occurs in extreme northwestern Ontario and northeastern Saskatchewan. (Man.)

\***Eutamias minimus neglectus** (Allen). LAKE SUPERIOR CHIPMUNK. *Suisse du lac Supérieur.*

1890. *Tamias quadrivittatus neglectus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 3, p. 106 (June 1890).

1922. *Eutamias minimus neglectus* Howell, Journ. Mamm., 3:3, p. 184 (Aug. 4, 1922).

1925. *Eutamias minimus jacksoni* Howell, Journ. Mamm., 6:1, p. 53. (Crescent Lake, Oneida county, Wisconsin; type, U.S.N.M., No. 227423.) Renaming of *neglectus* on the assumption that the type specimen is referable to *borealis*.

1944. *Eutamias minimus neglectus* Anderson and Rand, Can. Field-Nat., 57, 7-8, p. 133, Oct.-Nov. 1943 (Jan. 24, 1944).

*Type Locality.* Mouth of Montreal River, eastern end of Lake Superior, Ontario, Canada. (Type, M.C.Z., No. 1575.)

*Range.* From southeastern Manitoba (Caddy Lake, Sandilands Forest Reserve, Vivian) across Ontario probably to Lake Abitibi, north at least to Lake Seul\* and Kapuskasing; southward into northern Michigan, Wisconsin, and northeastern Minnesota, intergrading with *borealis* in southern Manitoba and probably with *hudsonius* in northwestern Ontario. (Man., Ont.)



\***Eutamias minimus oreocetes** Merriam. TIMBERLINE CHIPMUNK. *Suisse des arbres alpins.*

1897. *Eutamias oreocetes* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 207 (July 1, 1897).

1922. *Eutamias minimus oreocetes* Howell, Journ. Mamm., vol. 3, p. 183 (Aug. 4, 1922).

*Type Locality.* Summit Mountain, north of Summit Station (on Great Northern Railroad), Flathead county, Montana. (Type: U.S.N.M., No. 72468.)

*Range.* Along timberline and alpine meadows of Continental Divide of Rocky Mountains from Glacier National Park in northern Montana, Waterton Lakes National Park\* in southwestern Alberta, and some outlying mountains (Mount Forgetmenot\*) in southwestern Alberta. Crowe (1943, pp. 399-400) refers specimens from Tornado Pass (Alta. and B.C.), from Mount Assiniboine Provincial Park, British Columbia, as well as Banff National Park, to *oreocetes*. A series of eleven specimens in the N.M.C. from Banff National Park (Jasper-Banff Highway, 40-mile Creek at 4,500 feet, and Cascade Basin between 7,000 and 8,000 feet), are closer to *borealis* in colour, though average small, and are referred to *borealis* as evidently the southwest corner of the range of that subspecies (Anderson and Rand, 1944, p. 133). (Alta., B.C.)

#### *amoenus* group

\***Eutamias amoenus affinis** (Allen). COLUMBIAN CHIPMUNK. *Suisse de la Colombie-Britannique.*

1890. *Tamias quadrivittatus affinis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 3, p. 103 (June 1890).

1922. *Eutamias amoenus affinis* Howell, Journ. Mamm., vol. 3, p. 184 (Aug. 4, 1922).

*Type Locality.* Ashcroft, British Columbia, Canada. (Type: A.M.N.H., No. 2019/1500.)

*Range.* Interior of southern British Columbia and central Washington; north to Lac La Hache, British Columbia; east to Okanagan Lake, Midway\*, Westbridge\*, Rossland\*, Creston\* (on east side of Kootenay River); and Columbia River in central Washington; west to Lillooet\*, British Columbia, and the eastern slopes of the Cascade Range in Washington; south to Columbia River, southern Washington. Zonal range: Transition; 1,000 feet (Oroville, Wash., and Okanagan Lake, B.C.) to 6,500 feet (Okanagan county, Wash.). (B.C.)

\***Eutamias amoenus canicaudus** Merriam. GREY-TAILED CHIPMUNK. *Suisse à queue grise.*

1903. *Eutamias canicaudus* Merriam, Proc. Biol. Soc. Wash., vol. 16, p. 77 (May 29, 1903).

1922. *Eutamias amoenus canicaudus* Howell, Journ. Mamm., vol. 3, p. 184 (August 4, 1922).

*Type Locality.* Spokane, Spokane county, Washington. (Type: U.S.N.M., No. 27007/34428.)

*Range.* Eastern Washington, northern Idaho, and small areas in north-western Montana and southeastern British Columbia where it intergrades with *E. a. luteiventris*; east to Clark Fork of the Columbia (opposite Thompson Falls, Montana); west to Columbia River; north to Marcus, Washington; south to Orofino, Idaho, and the foothills of the Blue Mountains, southeastern Washington. Zonal range transition: 1,100 to 3,000 feet altitude. (Four specimens from Cranbrook\* and nineteen from west side of Kootenay River near Newgate\* on the Montana border by H. M. Laing and Ian McTaggart Cowan in 1930, have recently been re-examined by Cowan and considered to show intergradation between *luteiventris* and *canicaudus* in this region.) (B.C.)

\***Eutamias amoenus felix** (Rhoads). TAWNY CHIPMUNK. *Suisse tanné.*

1895. *Tamias quadrivittatus felix* Rhoads, Amer. Nat., vol. 29, p. 941 (Oct. 1895).

1922. *Eutamias amoenus felix* Howell, Journ. Mamm., vol. 3, p. 184 (Aug. 4, 1922).

*Type Locality.* Church Mountain, Mount Baker Range, New Westminster district, British Columbia, Canada, near International Boundary. Altitude, 7,000 feet. (Type: Acad. Nat. Sci. Phila., No. 9355; No. 2352, S. N. Rhoads coll.)



*Range.* Coast region of southern British Columbia, from the Mount Baker Range, near the United States-Canada International Boundary\*, north to Bute Inlet (Fawn Bluff\* and Purcell Point\*). Zonal range: Canadian and Transition; sea-level to 5,700 feet altitude. (B.C.)

\**Eutamias amoenus ludibundus* (Hollister). HOLLISTER'S CHIPMUNK. *Suisse de Hollister*.

1911. *Eutamias ludibundus* Hollister, Smiths. Misc. Coll., vol. 56, No. 26, p. 1 (Dec. 5, 1911).

1922. *Eutamias amoenus ludibundus* Howell, Journ. Mamm., vol. 3, p. 184 (Aug. 4, 1922).

*Type Locality.* Yellowhead (or Cowdung) Lake, British Columbia, Canada. Altitude, 3,700 feet. (Type: U.S.N.M., No. 174225.)

*Range.* Central, eastern and southwestern British Columbia and extreme west-central Alberta; south through western Lillooet (district\*) and on both slopes of the Cascades as far as central Oregon; northern and western limits imperfectly known, but north at least to Hazelton\*, British Columbia, and head of Smoky River, Alberta. Zonal range: Canadian. (Specimens in N.M.C. from Kimsquit\* at head of Dean Inlet and Stuie\* and Rainbow Mountains\* east of head of Bella Coola Inlet, the only areas where this form approaches the western B.C. coast.) (Alta., B.C.)

\**Eutamias amoenus luteiventris* (Allen). BUFF-BELLIED CHIPMUNK. *Suisse à ventre jaunâtre*.

1890. *Tamias quadrivittatus luteiventris* Allen, Bull. Amer. Mus. Nat. Hist., vol. 3, p. 101 (June 1890).

1922. *Eutamias amoenus luteiventris* Howell, Journ. Mamm., vol. 3, p. 179 (Aug. 4, 1922).

*Type Locality.* "Chief Mountain Lake" (= Waterton Lake), Alberta (3½ miles north of the U.S.-Canada boundary). (Type: U.S.N.M., No. 11991/37996.)

*Range.* "Rocky Mountain region of southern Alberta\*, southeastern British Columbia\*, extreme northeastern and southeastern Washington, northern, central, and southeastern Idaho, western Montana, and northwestern Wyoming; north to Golden, British Columbia, and Banff\*, Alberta; east to the Highwood and Crazy Mountains, Mont., and the Shoshone Range, Wyo., south to the Salt River Mountains, Wyo.; west to Shuswap and Okanagan Lake, British Columbia, Thompson Falls, Mont., and through central Idaho to the Blue Mountains in northeastern Oregon and southeastern Washington. A series of pallid specimens from Cranbrook\* and Newgate\* (on Kootenay River just north of Montana border), are considered by Ian McTaggart Cowan to be intergrades between *luteiventris* and *E. a. canicaudus*. Zonal range: Transition and Canadian; 3,000 feet (Cranbrook\*, B.C.) to 10,000 (Teton Mountains, Wyo.)" (Howell, 1929, pp. 67-68). (Alta., B.C.)

#### *quadrivittatus* group

\**Eutamias ruficaudus ruficaudus* Howell. RUFOUS-TAILED CHIPMUNK. *Suisse à queue rouge*.

1920. *Eutamias ruficaudus* Howell, Proc. Biol. Soc. Wash., vol. 33, p. 91 (Dec. 30, 1920).

*Type Locality.* Upper St. Mary Lake, Glacier county, Montana. (Type: U.S.N.M., No. 72294.)

*Range.* Eastern slopes of the Rocky Mountain divide in western Montana from Deer Lodge county north through Glacier National Park to the Canadian boundary; in Canada occurs abundantly at higher levels of Waterton Lakes National Park\*, in extreme southwestern corner of Alberta, as well as on the western side of the British Columbia-Alberta interprovincial boundary\* in the same region. (Alta., B.C.)



**\**Eutamias ruficaudus simulans* Howell.** CŒUR D'ALENE CHIPMUNK. *Suisse de Cœur d'Alene.*

1922. *Eutamias ruficaudus simulans* Howell, Journ. Mamm., vol. 3, p. 179 (Aug. 4, 1922).

*Type Locality.* Cœur d'Alene, Kootenai county, Idaho. (Type: U.S.N.M., No. 28487/40591.)

*Range.* Mountains of northwestern Montana (west of the main divide), northern Idaho, northeastern Washington, and southeastern British Columbia north to Creston\*, Nelson, and Invermere in East Kootenay Valley. (B.C.)

*townsendii* group

**\**Eutamias townsendii townsendii* (Bachman).** TOWNSEND'S CHIPMUNK. *Suisse de Townsend.*

1839. *Tamias townsendii* Bachman, Journ. Acad. Nat. Sci., Phila., vol. 8, pt. 1, p. 68.

1897. *E[utamias] townsendi* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 192 (July 1, 1897).

1922. *Eutamias townsendii townsendii* Howell, Journ. Mamm., vol. 3, No. 3, p. 184 (Aug. 4, 1922).

*Type Locality.* Lower Columbia River, near lower mouth of Willamette River, Oregon. (Type (lectotype), skin, Acad. Nat. Sci. Phila., No. 241.)

*Range.* Coast region of southwestern British Columbia, from lower Fraser River east to Church Mountain (Mount Baker Range) and coast region of Washington and Oregon west of the Cascade Range as far south as Coos county, Oregon. Zonal range: Transition and Lower Canadian; sea-level to 6,000 feet altitude. Howell (1929, p. 109) referred seven N.M.C. specimens to *E. t. townsendii*: Douglas\* 3; Skagit\* 2; Tami Hy Creek\* 2; in addition to specimens from other collections from Chilliwack, Langley, Church Mountain, Mount Lehman, Sumas, Vedder Mountain, and New Westminster. (B.C.)

**\**Eutamias townsendii cooperi* (Baird).** COOPER'S CHIPMUNK. *Suisse de Cooper.*

1855. *Tamias cooperi* Baird, Proc. Acad. Nat. Sci. Phila., p. 334.

1907. *Eutamias cooperi* Lyon, Smiths. Misc. Coll., vol. 50, p. 89.

1922. *Eutamias townsendii cooperi* Howell, Journ. Mamm., vol. 3, p. 184 (Aug. 4, 1922).

*Type Locality.* Klickitat Pass, Cascade Mountains, Skamania county, Washington. Altitude, 4,500 feet. (See Cooper, Amer. Nat., vol. 2, p. 531 (Dec. 1868).) (Type: U.S.N.M., No. 212/1183; cotype: M.C.Z., No. 4754, formerly No. 211/1182, U.S.N.M.)

*Range.* Cascade Range (both slopes) in Washington and Oregon and higher parts of the Olympic Mountains, Washington; north to southwestern British Columbia (near Hope\*), Chilliwack Lake\*, Cultus Lake\*, Huntingdon\*, Lihumitson Park\*. Zonal range: Canadian; 1,100 feet (Lake Chelan) to 6,500 feet altitude. Howell (1929) states that *townsendii* grades into *cooperi* along the western base of the Cascades, and that intermediate specimens have been examined from Roab's Ranch, near Hope, B.C. (B.C.)

Genus *Tamiasciurus* Trouessart.<sup>1</sup> Red squirrels. Chickarees

1880. *Tamiasciurus* Trouessart, Le Naturaliste, vol. 2, No. 37, as subgenus of *Sciurus* (October 1880). Type, by subsequent designation, *Sciurus hudsonicus* Erxleben.

1915. *Tamiasciurus* Allen, J. A., Review of the South American Sciuridae, Bull. Amer. Mus. Nat. Hist., vol. 34, Art. 8, pp. 147-309, section on North American genera, pp. 172-173 (May 7, 1915). Raised to generic rank for small North American arboreal squirrels of species: *Tamiasciurus hudsonicus*, *T. douglasii*, *T. fremonti*, each with numerous subspecies.

<sup>1</sup> Reviewed by Bangs, Outram, A Review of the Squirrels of Eastern North America, Proc. Biol. Soc. Wash., vol. 10, pp. 145-167 (Dec. 28, 1896). Revised by Allen, J. A., Revision of the Chickarees, or North American Red Squirrels (Subgenus *Tamiasciurus*), Bull. Amer. Mus. Nat. Hist., vol. 10, pp. 249-298 (July 22, 1898).



\***Tamiasciurus hudsonicus hudsonicus** (Erxleben). HUDSON BAY RED SQUIRREL.  
*Ecureuil roux de la baie d'Hudson.*

1777. [*Sciurus vulgaris*] *hudsonicus* Erxleben, Syst. Regni Anim., vol. 1, p. 416. Hudson Strait.  
1885. *Sciurus hudsonius hudsonius* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 595. (Part.)  
1894. *Sciurus hudsonicus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 6, p. 325 (Nov 7, 1894).  
1936. *Tamiasciurus hudsonicus hudsonicus* A. H. Howell, Proc. Biol. Soc. Wash., vol. 49, pp. 133-136 (Aug. 22, 1936). (Fixes the long disputed type locality at the mouth of Severn River, Hudson Bay.) (Type not known.)

*Type Locality.* Mouth of Severn River, southwest side of Hudson Bay, Ontario, Canada.

*Range.* Forested areas draining into Hudson Bay in southeastern Mackenzie and southern Keewatin districts, Northwest Territories; northern, central, and eastern Manitoba south to northeastern Minnesota; Ontario from the Manitoba border to west side of Hudson Bay and James Bay, and the southwestern corner of Quebec; south to north shore of Lake Superior and Georgian Bay; intergrading with *ungavensis* southeast of James Bay, with *loquax* in upper Ottawa River Valley, and with *preblei* in northern Saskatchewan. (Man., N.W.T., Ont., P.Q., Sask.)

\***Tamiasciurus hudsonicus columbiensis** Howell. BRITISH COLUMBIA RED SQUIRREL.  
*Ecureuil roux de la Colombie-Britannique.*

1936. *Tamiasciurus hudsonicus columbiensis* Howell, Proc. Biol. Soc. Wash., vol. 49, pp. 135-136 (Aug. 22, 1936).

*Type Locality.* Raspberry Creek, about 30 miles southeast of Telegraph Creek, northern British Columbia. (Type: A.M.N.H., No. 19891.)

*Range.* Northern and central British Columbia (Alaska Highway\*) and southern Yukon, from vicinity of Lake Laberge, Yukon, south to Chilcotin River, B.C., and eastward to Banff\* and Jasper\* National Parks in the Rocky Mountains of western Alberta. (Alta., B.C., Y.T.)

\***Tamiasciurus hudsonicus gymnicus** (Bangs). BANGS' RED SQUIRREL. EASTERN RED SQUIRREL. *Ecureuil roux de l'Est.*

1899. *Sciurus hudsonicus gymnicus* Bangs, Proc. New England Zool. Club, vol. 1, p. 28 (March 31, 1899).

*Type Locality.* Greenville, near Moosehead Lake, Piscataquis county, Maine. (Type: M.C.Z., coll. of E. A. and O. Bangs, No. 4914.)

*Range.* Mostly in the spruce forest of eastern North America south of the Gulf of St. Lawrence, northern Maine, northern New Hampshire, northern Vermont, and northern New York, all of Nova Scotia\*, New Brunswick\*, and Prince Edward Island\*, Gaspe Peninsula\*, and other parts of Quebec south of the St. Lawrence, intergrading with *T. h. laurentianus* south of Montreal. (N.B., N.S., P.E.I., P.Q.)

†\***Tamiasciurus hudsonicus laurentianus** Anderson. LAURENTIAN RED SQUIRREL.  
*Ecureuil roux laurentien.*

1942. *Tamiasciurus hudsonicus laurentianus* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, for 1941, pp. 31-33, 45-47 (July 14, 1942).

*Type Locality.* Lac Marchant, near Moisie Bay, Saguenay county, north shore of Gulf of St. Lawrence, Quebec, Canada. (Type: N.M.C., No. 9322.)

*Range.* Laurentian region from Strait of Belle Isle west along north shore of Gulf of St. Lawrence and St. Lawrence River north and northwest to Lake St. John region (Quebec county) and St. Maurice River (Champlain county), intergrading with *T. h. loquax* in Lièvre River Valley (Labelle county) and with *T. h. gymnicus* south of Montreal. (P.Q.)



**\**Tamiasciurus hudsonicus loquax* (Bangs).** SOUTHERN RED SQUIRREL. *Ecureuil roux d'Alleghenies*.

1896. *Sciurus hudsonicus loquax* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 161 (Dec. 28, 1896).

1936. *Tamiasciurus hudsonicus loquax* Howell, A. H., Occ. Papers Mus. Zool. Univ. Mich., No. 338 (July 7, 1936).

*Type Locality.* Liberty Hill, New London county, Connecticut. (Type: M.C.Z., coll. of E. A. and O. Bangs, No. B4270.)

*Range.* Alleghenian and Carolinian fauna of the eastern and east-central United States. Range in Canada principally in eastern and southern Ontario south of the Ottawa River and west to Lake Nipissing and Georgian Bay. Intergrading with *T. h. laurentianus* in southwestern Quebec (Lièvre River Valley, Labelle county), and with *T. h. hudsonicus* north of the Ottawa River in Gatineau and Pontiac counties, and in Algonquin Park region, Ontario. (Ont., P.Q.)

**\**Tamiasciurus hudsonicus minnesota* Allen.** MINNESOTA RED SQUIRREL. *Ecureuil roux du Minnesota*.

1899. *Sciurus hudsonicus minnesota* Allen, Amer. Nat., vol. 33, p. 640 (Aug. 1899).

1943. *Tamiasciurus hudsonicus murii* A. H. Howell, Proc. Biol. Soc. Wash., vol. 56, pp. 67-68 (June 16, 1943). Moorhead, Clay county, Minnesota (posthumous).

*Type Locality.* Fort Snelling, Hennepin county, Minnesota. (Type: A.M.N.H., No. 4374.)

*Range.* Most of timbered areas of Minnesota outside the heavy coniferous forest areas of the northeastern part of the state, north along the Red River Valley in Minnesota and eastern North Dakota to southern Manitoba; east to Wisconsin and southward locally into northern and central Iowa to a little beyond the border of the southern lobe of the Wisconsin (glacial) drift area. (Man.)

**\**Tamiasciurus hudsonicus pallescens* A. H. Howell.** NORTH DAKOTA RED SQUIRREL. *Ecureuil roux du Dakota nord*.

1942. *Tamiasciurus hudsonicus pallescens* A. H. Howell, Proc. Biol. Soc. Wash., vol. 55, pp. 13-14 (May 12, 1942).

*Type Locality.* Eight miles east of Upham, McHenry county, North Dakota. (Type: U.S.N.M., No. 261625.)

*Range.* North-central North Dakota, specifically the Souris River Valley in McHenry county, and the Turtle Mountains in Bottineau area, probably Rolette county; and adjacent parts of southwestern Manitoba (Max Lake\*, Turtle Mountains). (Man.)

**\**Tamiasciurus hudsonicus petulans* Osgood.** SAINT ELIAS RED SQUIRREL. *Ecureuil roux des montagnes St-Elas*.

1900. *Sciurus hudsonicus petulans* Osgood, North Amer. Fauna, No. 19, p. 27 (Oct. 6, 1900).

*Type Locality.* Glacier, White Pass, southern Alaska. Altitude, 1,870 feet. (Type: U.S.N.M., No. 97457.)

*Range.* Lynn Canal and White Pass region of the northern part of the Alaska panhandle and closely adjacent parts of extreme northwestern British Columbia. Osgood (1900, p. 26) referred specimens from Bennett, B.C., to *hudsonicus* (the race now considered as *T. h. columbiensis* Howell, 1936), and Swarth (1926, p. 149) considered Atlin, B.C., specimens showed intergradation by individual variation with *petulans* of the nearby Alaska coast. Five specimens in the National Museum of Canada from head of Chitina River\*, Alaska, seem to be referable to *petulans*, but the only specimen available from adjacent part of southwestern Yukon is one taken at Burwash Landing\*, on northwestern arm of Kluane Lake, by Dr. C. H. D. Clarke in 1943. (B.C., Y.T.)



\***Tamiasciurus hudsonicus picatus** (Swarth). NORTHWEST COAST RED SQUIRREL. *Ecureuil roux de la côte nord-ouest.*

1921. *Sciurus hudsonicus picatus* Swarth, Journ. Mamm., vol. 2, p. 92 (May 2, 1921).

1938. *Sciurus lanuginosus* Bachman, Proc. Zool. Soc. London, p. 101. Hunter Island, British Columbia.

*Type Locality.* Kupreanof Island, 25 miles south of Kake Village, at southern end of Keku Straits, southeastern Alaska. (Type: M.V.Z., No. 8767.)

*Range.* Mainland and islands near the coast of southeastern Alaska from Lynn Canal southward along northwestern coast of British Columbia for an undetermined distance, intergrading in the north with *petulans* and in the south with *vancouverensis*. Recorded by Swarth (1921, p. 93) from Kupreanof, Kulu, Mitkof, Wrangell, Zarembo, Etolin, Revillagigedo, and Sergief islands, and on mainland from Taku River, Thomas Bay, Stikine River, Bradford Canal, and Chickamin River.

A. H. Howell (1938, *in litt.*) considered specimens from Hunter Island in collection of Kenneth Racey to be the same as topotypes of *picatus*, and that, therefore, the name *lanuginosus* antedates *picatus*. Other students of the British Columbia coastal fauna consider these specimens in some characters approach nearer to *vancouverensis*, and as other material examined appears to show intergradation, pending further investigations it does not appear advisable to change the nomenclatural status of these forms. (B.C.)

\***Tamiasciurus hudsonicus preblei** Howell. MACKENZIE RED SQUIRREL. *Ecureuil roux du Mackenzie.*

1936. *Tamiasciurus hudsonicus preblei* Howell, Proc. Biol. Soc. Wash., vol. 49, pp. 133-135 (Aug. 22, 1936).

*Type Locality.* Fort Simpson, Mackenzie district, Northwest Territories. (Type: U.S.N.M., No. 133862.)

*Range.* Chiefly the Athabaska-Mackenzie Valley and central and northern Yukon in Canada, and the greater part of central Alaska; south to North Saskatchewan River, Saskatchewan. (Alta., N.W.T., Sask., Y.T.)

\***Tamiasciurus hudsonicus richardsoni** (Bachman). RICHARDSON'S RED SQUIRREL. *Ecureuil roux de Richardson.*

1838. *Sciurus richardsoni* Bachman, Proc. Zool. Soc. London, p. 100.

1885. *Sciurus hudsonicus richardsoni* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 595 (1885).

1898. *Sciurus hudsonicus richardsonii* Allen, Bull. Amer. Mus. Nat. Hist., vol. 10, p. 265 (July 22, 1898).

*Type Locality.* Head of Big Lost River, Fremont county, Idaho.

*Range.* Western border of northern Montana (Bitterroot and Cœur d'Alene Mountains), central and northern Idaho (Lost River, Salmon River, Pashimeroi, and Sawtooth Mountains), west to Powder River and Blue Mountains in eastern Oregon, and mountains of northeastern Washington to Colville; northward into West Kootenay district of British Columbia east of Columbia River (Creston\*, Yahk\*, Cranbrook\*, Newgate\*, Fernie\*), intergrading with *streatori* in vicinity of Trail\* and Rossland\*; in fairly typical form north of the International Boundary to Waterton Lakes National Park\* in extreme southwestern Alberta, intergrading with *columbiensis* to the northward of Crowsnest Pass\*, Alberta. (Alta., B.C.)

\***Tamiasciurus hudsonicus streatori** Allen. STREATOR'S RED SQUIRREL. *Ecureuil roux de Streater.*

1898. *Sciurus hudsonicus streatori* Allen, Bull. Amer. Mus. Nat. Hist., vol. 10, p. 267 (July 22, 1898).

*Type Locality.* Ducks, British Columbia, Canada. (Type: A.M.N.H., No. 2054.)



*Range.* Central part of northern Washington, from the Columbia River northward over central British Columbia, intergrading with *columbiensis* in central British Columbia and with *richardsoni* in southeastern British Columbia. (B.C.)

†\****Tamiasciurus hudsonicus ungavensis*** Anderson. UNGAVA RED SQUIRREL. *Ecureuil roux d'Ungava*.

1942. *Tamiasciurus hudsonicus ungavensis* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, for 1941, pp. 33-35, 46-49 (July 14, 1942).

*Type Locality.* Lake Waswanipi ("Woswonaby Post," Hudson's Bay Company), Abitibi district, Quebec, about 180 miles southeast of intersection of Quebec-Ontario interprovincial boundary with James Bay. (Type: N.M.C., No. 11278.)

*Range.* Wooded areas of western part of Ungava Peninsula (Québec Nouvelle), districts of Abitibi and Mistassini, in territory draining into Hudson Strait and east sides of Hudson and James Bays to border of extreme north-eastern Ontario. (P.Q.)

\****Tamiasciurus hudsonicus vancouverensis*** Allen. VANCOUVER RED SQUIRREL. *Ecureuil roux de l'île de Vancouver*.

1890. *Sciurus hudsonicus vancouverensis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 3, p. 165 (Nov. 14, 1890).

*Type Locality.* Duncan Station, Vancouver Island, British Columbia, Canada. (Type: A.M.N.H., No. 2059.)

Regarded by Osgood (North Amer. Fauna, No. 10, p. 27, Oct. 6, 1900) as a distinct species, but large series of specimens from Vancouver Island and other smaller islands northeast of Vancouver Island and on the mainland coast show that it intergrades with northern forms.

*Range.* The whole of Vancouver Island from Victoria\* to Cape Scott\*; also in typical form on some of the islands northeast of Vancouver Island from outside of Bute Inlet (Small Gillard Island\*, Yuculta Rapids), north at least to Calvert Island\*; intergrading with *T. h. picatus* farther north.

On Stuart Island\* at entrance of Bute Inlet, the squirrels are *Tamiasciurus douglasii mollipilosus*, which is the only native red squirrel on the mainland coast of British Columbia south of Rivers Inlet. (B.C.)

\****Tamiasciurus douglasii mollipilosus*** Audubon and Bachman. NORTHWESTERN RED-BELLIED SQUIRREL. *Ecureuil à ventre roux du nord-ouest*.

1841. *Sciurus molli-pilosus* Audubon and Bachman, Proc. Acad. Nat. Sci. Phila., vol. 1, p. 102 (Oct. 1841).

1898. *Sciurus douglasii mollipilosus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 10, p. 276 (July 22, 1898).

1898. *Sciurus douglasii cascadiensis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 10, p. 277 (July 22, 1898). Type locality, Mount Hood, Oregon. (Type: U.S.N.M., No. 80229.)

1940. *Tamiasciurus douglasii mollipilosus* A. H. Howell, MSS. (121 N.M.C. specimens of *douglasii* examined by Howell and all referred to this subspecies.)

*Type Locality.* Coast of northern California. (Type specimen not designated.)

*Range.* Pacific coast region of northern California, west of the Coast Range, from Sonoma county (Petaluma), north into Curry county (Port Orford), Oregon; Cascades Mountains region of Oregon and Washington, north into British Columbia, including also the coast region at the mouth of Fraser River\*, and north to Rivers Inlet\* (about 51° 30' N.), about 60 miles northeast of Vancouver Island, where it meets the range of *T. hudsonicus vancouverensis* without intergradation. (B.C.)



Genus *Sciurus* Linnaeus. Large Tree Squirrels

1758. *Sciurus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 63. Type, *Sciurus vulgaris* Linnaeus.

Subgenus *Guerlinguetus* Gray<sup>1</sup>

1821. *Guerlinguetus* Gray, London Med. Repos., vol. 15, p. 304 (April 1821). Type, *Sciurus guerlinguetus* Gray = *Sciurus aestuans* Linnaeus.  
 1880. *Parasciurus* Trouessart, Le naturaliste, vol. 2, p. 292 (Oct. 1880). Type, *Sciurus niger* Linnaeus.  
 1899. *Araeosciurus* Nelson, Proc. Wash. Acad. Sci., vol. 1, p. 29 (May 9, 1899). Type, *Sciurus oculatus* Peters.  
 1915. *Mesosciurus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 34, p. 212 (May 17, 1915). Type, *Sciurus aestuans hoffmanni* Peters.  
 1915. *Histriosciurus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 34, p. 213 (May 17, 1915). *Sciurus gerrardi* Gray.

***Sciurus carolinensis*<sup>2</sup> hypophaeus** Merriam. MINNESOTA GRAY SQUIRREL. *Ecureuil gris du Minnesota*.

1886. *Sciurus carolinensis hypophaeus* Merriam, Science, vol. 7, p. 351 (April 16, 1886).

*Type Locality.* Elk River, Sherburne county, Minnesota. (Type: U.S.N.M., No. 193864.)

*Range.* "The edge of the forest belt in Minnesota (a region having quite a distinctive mammalian fauna). Limits of range unknown."—Bangs, 1896, p. 156. Gray squirrels assumed to belong to this form are rare and locally distributed in southern Manitoba. Sight records from the early 1880's may have been confused with the common gray ground squirrel (*Citellus franklini*), but *Sciurus carolinensis* has within recent years been reported in Red River Valley as far north as East Selkirk and west to Portage la Prairie and the Pembina ridge. One taken at Aweme by Stuart Criddle in 1940, and two from North Winnipeg taken in 1941, in the collection of J. Dewey Soper, have been examined, and although they can not be definitely determined by the characters predicated for *S. c. hypophaeus*, have skulls heavier and noticeably broader across interorbitals and postorbitals, and with rostrum broader than in any of 37 skulls of *S. c. leucotis* from eastern Canada. (Man.)

**\**Sciurus carolinensis leucotis*** (Gapper). NORTHEASTERN GRAY SQUIRREL. *Ecureuil gris du nord-est*.

1830. *Sciurus leucotis* Gapper, Zool. Journ., vol. 5, p. 206.  
 1877. *Sciurus carolinensis* var. *leucotis* Allen, Monogr. N. Amer. Rodentia, p. 701 (Aug. 1877).  
 1885. *Sciurus carolinensis leucotis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 595 (1885).

*Type Locality.* Region between York and Lake Simcoe, Ontario, Canada. (Type not known.)

*Range.* Transition zone and locally lower edge of Canadian zone from the Alleghenies of Pennsylvania north through New York and New England to southern New Brunswick, southern Quebec, and southern Ontario; west to Minnesota. Introduced in vicinity of Ottawa and Montreal, although perhaps indigenous locally, and at present locally common on both sides of Ottawa River between these two points. Occasionally reported from various parts of Nova Scotia; perhaps escaped cage animals. In British Columbia "black squirrels" were introduced from Ontario into Stanley Park, Vancouver, prior to 1914, and both grey and black phases are fairly common about Stanley Park and the west end of the city but had not spread far outside of that area (Kenneth Racey, 1934, in letter). (B.C., N.B., N.S., P.Q., Ont.)

<sup>1</sup>Revised by Nelson (under the names *Parasciurus*, *Araeosciurus*, and *Guerlinguetus*, Proc. Wash. Acad. Sci., vol. 1, pp. 88-101 (May 9, 1899).

<sup>2</sup>Revised by Outram Bangs, A Revision of the Squirrels of Eastern North America, Proc. Biol. Soc. Wash., vol. 10, pp. 145-167, figs. 4, Pls. 3; re *Sciurus carolinensis* subspecies, pp. 153-159 (Dec. 28, 1896).



Subfamily *Pteromyinae*. Flying SquirrelsGenus *Glaucomys* Thomas<sup>1</sup>

1908. *Glaucomys* Thomas, Ann. and Mag. Nat. Hist., ser. 8, vol. 1, p. 5 (Jan. 1908). Type, *Mus volans* Linnaeus.

*volans* group

\**Glaucomys volans volans* (Linnaeus). SMALL EASTERN FLYING SQUIRREL. *Petit écureuil volant de l'Est*.

1758. [*Mus*] *volans* Linnaeus, Syst. Nat. ed. 10, vol. 1, p. 63.  
 1885. *Sciuropterus volucella volucella* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885). (Part.)  
 1896. *Sciuropterus silus* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 163 (Dec. 28, 1896). Top of Katis Mountain, near White Sulphur Springs, Greenbrier county, West Virginia. Altitude 3,200 feet.  
 1915. *Glaucomys volans* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 110 (May 27, 1915).  
 1915. *Pteromys volans nebrascensis* Swenk, University Studies (Lincoln, Nebraska), vol. 15, p. 151 (April) (Sept. 25, 1915). Nebraska City, Otoe county, Nebraska.

*Type Locality*. Virginia. (See Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 165 (Dec. 28, 1896).)

*Range*. In Canada found only in southern and eastern Ontario, from Essex county (Point Pelee\*) northward through the region between St. Clair River, Lake Erie, and western end of Lake Ontario (Toronto\*), along part of north shore of Lake Ontario, the most northerly record being at about 45° N. in Lanark county (Clayton\*). According to Saunders (1932, p. 291), *volans* is replaced by the larger northern species, *G. s. macrotis*, at 1,000 feet altitude in some areas even as far south as 43° 30' N. *G. volans* is readily distinguished from the *sabrinus* group by its smaller size and by having the hair on under parts white to the roots.

This subspecies has a wide range south of the Canadian border; from southern New Hampshire and Vermont, northern New York, Pennsylvania, Michigan, Wisconsin, and central Minnesota, south to North Carolina, Tennessee, Arkansas, and northwestern Oklahoma; west to eastern Kansas and Nebraska. (Ont.)

*sabrinus* group

\**Glaucomys sabrinus sabrinus* (Shaw). HUDSON BAY FLYING SQUIRREL. *Écureuil volant du Nord*. *Polatouche du Canada*.

1801. *Sciurus sabrinus* Shaw, Gen. Zool., vol. 2, p. 157.  
 1885. *Sciuropterus volucella hudsonius* True, Proc. U.S. Nat. Mus., vol. 7, 1884, p. 596 (1885). (Part.)  
 1896. *Sciuropterus sabrinus* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 162 (Dec. 28, 1896).  
 1915. (*Glaucomys*) *sabrinus* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 111 (May 27, 1915).

*Type Locality*. Severn River, northwestern Ontario, Canada. (Type not now known to exist. The names *hudsonius* and *sabrinus* were based on Forster's account (Philos. Trans. 62, p. 379, 1772) of a specimen sent to the Royal Society from the mouth of Severn River.)

*Range*. Northern interior of Canada from Simpson and Providence\* on Mackenzie River, Great Slave Lake, south through central and eastern Alberta to Edmonton\* and Calgary; east across southern Mackenzie, northern Saskatchewan, and northern Manitoba to lower Churchill River; northern and western Ontario as far south as Nipissing, and central and southern Quebec (except for some distance north of the Ottawa River\* where it intergrades with *G. s. macrotis*; east to north shore of lower St. Lawrence River, Lake Edward, Godbout, and probably farther east). In the United States extends only into northeastern corner of Minnesota. (Alta., Man., N.W.T., Ont., P.Q., Sask.)

<sup>1</sup>Revised by A. H. Howell, Revision of the North American Flying Squirrels, North Amer. Fauna, No. 44, pp. 1-64, Pls. 7, maps 4 (June 13, 1918). See also I. McT. Cowan, The Distribution of Flying Squirrels in Western British Columbia with the description of a new race, Proc. Biol. Soc. Wash., vol. 50, pp. 77-82 (June 22, 1937).



**\**Glaucomys sabrinus alpinus* (Richardson).** ROCKY MOUNTAIN FLYING SQUIRREL. *Ecureuil volant des Rocheuses.*

1828. *Pteromys alpinus* Richardson, Zool. Journ., vol. 3, p. 519.

1897. *Sciuropterus alpinus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 319 (June 19, 1897).

1918. *Glaucomys sabrinus alpinus* Howell, North Amer. Fauna, No. 44, p. 40 (June 13, 1918).

*Type Locality.* Jasper House, Alberta, Canada. (See Howell, North Amer. Fauna, No. 44, p. 40 (June 13, 1918).)

*Range.* Rocky Mountains region of Alberta and British Columbia from vicinity of Henry House and Jasper National Park\*, north to Peace River and Lower Liard Crossing\*, on Alaska Highway; west through mountains of eastern Cariboo and southeastern Omineca region (Bowron Lake, Stuart Lake, Babine Lake, and Ootsa Lake). (B.C.)

**\**Glaucomys sabrinus bangsi* (Rhoads).** BANGS' FLYING SQUIRREL. *Ecureuil volant de Bangs.*

1897. *Sciuropterus alpinus bangsi* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 321 (June 1897).

1915. *Glaucomys bullatus* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 113 (May 27, 1915). Sawtooth (or Alturas) Lake, east base of Sawtooth Mountains, Idaho.

1918. *Glaucomys sabrinus bullatus* Howell, North Amer. Fauna, No. 44, p. 38 (June 13, 1918). (W. B. Davis, Recent Mammals of Idaho, p. 234 (April 5, 1939), treated *G. s. bullatus* as a synonym of *G. s. bangsi*, which has priority. See also W. V. Mayer, Variation and Systematic Position of the Flying Squirrel of Idaho, The Murrelet, vol. 22, No. 2, pp. 30-31 (Sept. 15, 1941).)

*Type Locality.* Idaho county, Idaho. (Type: M.C.Z., No. B6959.)

*Range.* Mountains of central Idaho, eastern Oregon, and western Montana. Three specimens from northern edge of Tobacco Plains region near Loon Lake, altitude 2,371 feet, east of Kootenay River near Newgate\* in southeastern British Columbia are considered to be intergrades with *fuliginosus*; skulls large and with large audital bullæ. (B.C.)

**\**Glaucomys sabrinus canescens* Howell.** PALLID FLYING SQUIRREL. *Ecureuil volant pâle.*

1915. *Glaucomys sabrinus canescens* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 111 (May 27, 1915).

*Type Locality.* Portage la Prairie, Manitoba, Canada. (Type: Chicago Mus. Nat. Hist., No. 7663.)

*Range.* Southern Manitoba, from south end of Lake Winnipeg (Poplar Point), Carberry, Portage la Prairie, Treesbank\*; western Minnesota (Breckinridge); eastern North Dakota (Grafton, Pembina, Portland); South Dakota (Black Hills); and Wyoming (Bear Lodge Mountains). (Man.)

**\**Glaucomys sabrinus columbiensis* Howell.** OKANAGAN FLYING SQUIRREL. *Ecureuil volant d'Okanagan.*

1915. *Glaucomys sabrinus columbiensis* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 111 (May 27, 1915).

*Type Locality.* Okanagan, British Columbia, Canada. (Type: U.S.N.M., No. 94310.)

*Range.* Interior valleys and foothills of southern British Columbia and northern Washington, from western Selkirks (Broadwater, Upper Arrow Lake), Shuswap Lake (mouth of Big Salmon River\*), Okanagan Valley (Okanagan Lumby, Okanagan Falls, Okanagan Landing, Penticton\*, 1,500 feet, Vernon), and Similkameen Valley (Hedley\*, 1,700 feet), south to Lake Chelan, Washington. (B.C.)



**\**Glaucomys sabrinus fuliginosus* (Rhoads).** DUSKY FLYING SQUIRREL. *Ecureuil volant sombre.*

1897. *Sciuropterus alpinus fuliginosus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 321 (July 19, 1897).
1915. *Glaucomys sabrinus latipes* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 112 (May 27, 1915). Glacier, British Columbia. (The writer examined our large series of *Glaucomys sabrinus* in comparison with specimens in the U.S. National Museum in 1931 with A. H. Howell, who agreed with his conclusion that *fuliginosus* has a much more extended range to the eastward than formerly supposed. It is a large subspecies hardly separable from *G. s. latipes*, which Howell then considered a "very weak form". Later studies strengthen this view and it seems justifiable to place *latipes* in synonymy.)
1918. *Glaucomys sabrinus fuliginosus* Howell, North Amer. Fauna, No. 44, p. 47 (June 13, 1918).

*Type Locality.* Cascade Mountains, near Martin Station, Kittitas county, Washington (altitude about 8,000 feet). (Type: A.M.S. Phila., No. 8058, S. N. Rhoads coll., No. 1058.)

*Range.* As mapped by Howell (1918, p. 30, fig. 3) restricted to a narrow strip on both sides of Cascades Mountains from extreme northern California (Siskiyou Mountains), Oregon, Washington, and southwestern British Columbia. A series of 58 specimens taken for the National Museum of Canada (1927-1930) shows that *fuliginosus* ranges along the whole of the International Boundary region (49th parallel) east of the coastal belt, from west slope of Cascades (Lihumitson Park\*, 4,800 feet, 7); Vancouver district\* 1; east slope of Cascades (Princeton\*, 2,400 feet, 3; Fairview-Keremeos summit\*, 3,800 feet, 1); Monashee Mountains (Osoyoos-Bridesville summit\*, 3,500 feet, 6; Westbridge\*, 2,075 feet, 7; Christina Lake\*, 2,366 feet, 1; Rossland\*, 5,000 feet, 1); Kootenay district (Creston\*, 1,800 feet, 12; Goatfell\*, 2,940 feet, 1; Yahk, Meadow Creek\*, 3,800 feet, 7; Cranbrook\*, 3,013 feet, 1; Newgate\*, 2,371-2,900 feet, 6); Rocky Mountains (west slope, Morrissey\*, 3,132 feet, 5) in British Columbia; and on eastern slope of Rocky Mountains in extreme southwestern Alberta (Waterton Lakes National Park\*). Intergradation is shown to some extent with *oregonensis* on west side of Cascades, with *columbiensis* on Salmon River south of Shuswap Lake, and with *bangsi* in southeastern British Columbia and southwestern Alberta. (Alta., B.C.)

**†\**Glaucomys sabrinus goodwini* Anderson.** GASPE FLYING SQUIRREL. *Ecureuil volant de Gaspé.*

1943. *Glaucomys sabrinus goodwini* Anderson, Ann. Rept. 1942, Provancher Soc. Nat. Hist. Canada, Quebec, pp. 55-56 (English), pp. 69-71 (French) (Sept. 7, 1943).

*Type Locality.* Berry Mountain Camp, junction of Berry Mountain Brook and Grand Cascapedia River, Matane county, Quebec; altitude, about 1,500 feet. (Type: N.M.C., No. 4959.)

*Range.* Gaspé Peninsula, Quebec, Canada. (Specimens examined from Bonaventure, Gaspé, and Matane\* counties, Quebec.) (P.Q.)

**†\**Glaucomys sabrinus gouldi* Anderson.** NOVA SCOTIA FLYING SQUIRREL. *Ecureuil volant de la Nouvelle-Ecosse.*

1943. *Glaucomys sabrinus gouldi* Anderson, Ann. Rept. 1942, Provancher Soc. Hist. Canada, Quebec, pp. 56-57 (English), pp. 71-72 (French) (Sept. 7, 1943).

*Type Locality.* Frizzleton, Inverness county, Cape Breton Island, Nova Scotia, Canada. (Type: N.M.C., No. 13873.)

*Range.* Province of Nova Scotia, including Cape Breton Island. (N.S.)



**\**Glaucomys sabrinus macrotis* (Mearns).** MEARNS' FLYING SQUIRREL. *Ecureuil volant de Mearns*.

1898. *Sciuropterus sabrinus macrotis* Mearns, Proc. U.S. Nat. Mus., vol. 21, p. 353 (Nov. 4, 1898).

1915. *G[laucmys] s[sabrinus] macrotis* Howell, Proc. Biol. Soc. Wash., vol. 28, p. 111 (May 27, 1915).

**Type Locality.** Hunter Mountain, Catskill Mountains, Greene county, New York. (Type: U.S.N.M., No. 83152.)

**Range.** From northern New Brunswick (Gloucester county, Miramichi Road\*; Madawaska county, Edmundston\*); through eastern counties of southern Quebec south of upper St. Lawrence River and southern parts of counties on north side of Ottawa River (Gatineau county, Blue Sea Lake\*) where it intergrades with *G. s. sabrinus*; west through east-central Ontario from upper St. Lawrence River to Parry Sound district and Lake Huron, reaching its southern limit about 43° 30' N. at altitudes over 1,000 feet in southern Ontario where its range overlaps that of *G. v. volans*. South of the Canadian border *macrotis* ranges from Maine, New Hampshire, Vermont, northern Massachusetts, Boreal (Canadian and Hudsonian zones) of northern New York, northern Michigan, and northeastern Wisconsin, west to Elk River, Minnesota, where it approaches *G. s. canescens*. (N.B., Ont., P.Q.)

**\**Glaucomys sabrinus makkovikensis* Sornborger.** LABRADOR FLYING SQUIRREL. *Ecureuil volant du Labrador*.

1900. *Sciuropterus sabrinus makkovikensis* Sornborger, Ottawa Naturalist, vol. 14, p. 48 (June 6, 1900).

1918. *Glaucomys sabrinus makkovikensis* Howell, North Amer. Fauna, No. 44, p. 34 (June 13, 1918).

**Type Locality.** Makkovik, Labrador. (Cotypes, M.C.Z., Nos. 10476, 10477.)

**Range.** Coast region of Labrador (Cartwright, L'Anse au Loup, Makkovik, Paradise) and eastern Quebec (Northwest River, and Bonne Esperance\* 5, Stick Point\* 3, Saguenay county, near Strait of Belle Isle). (P.Q., Labr.)

**\**Glaucomys sabrinus oregonensis* (Bachman).** BACHMAN'S FLYING SQUIRREL. OREGON FLYING SQUIRREL. *Ecureuil volant de Bachman*.

1839. *Pteromys oregonensis* Bachman, Journ. Acad. Nat. Sci. Phila., vol. 8, p. 101.

1897. *Sciuropterus alpinus oregonensis* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 324 (June 1897).

1918. *Glaucomys sabrinus oregonensis* Howell, North Amer. Fauna, No. 44, p. 44 (June 13, 1918).

**Type Locality.** Pine woods of the Columbia, near the sea. Probably near St. Helen, Columbia county, Oregon. (See Rhoads, Proc. Acad. Nat. Sci. Phila., 1897, p. 324 (June 1897).) (Type: Acad. Nat. Sci. Phila., No. 235.)

**Range.** Coast region of Oregon, Washington, and southwestern British Columbia\*, north at least as far as Bute Inlet (Bute Inlet\*, Huntingdon\*, Loughborough Inlet\*, Mission\*, Sumas Prairie, Vancouver, Vedder River). (B.C.)

**\**Glaucomys sabrinus reductus* Cowan.** ATNARKO FLYING SQUIRREL. *Ecureuil de l'Atnarko*.

1937. *Glaucomys sabrinus reductus* Cowan, Proc. Biol. Soc. Wash., vol. 50, pp. 79-81 (June 22, 1937).

**Type Locality.** Lonesome Lake, British Columbia, on Atnarko River, approximately 52° 10' N. and 125° 45' W. (Type: coll. of J. A. Munro, No. 689; deposited in B.C. Prov. Mus.)

**Range.** Western central British Columbia from middle Fraser River (Quesnel) west across Chilcotin Plateau (Chezacut, Anahim Lake) to Atnarko



River (Lonesome Lake) and Coast Range at head of Bella Coola River (Hagensborg\*, Nusatsum\*, and Stuiie\*), and Kimsquit\* at head of Dean Channel. (B.C.)

**\**Glaucomys sabrinus yukonensis* (Osgood).** YUKON FLYING SQUIRREL. *Ecureuil volant du Yukon.*

1900. *Sciuropterus yukonensis* Osgood, North Amer. Fauna, No. 19, p. 25 (Oct. 6, 1900).

1918. *Glaucomys sabrinus yukonensis* Howell, North Amer. Fauna, No. 44, p. 41 (June 13, 1918).

*Type Locality.* Camp Davidson, Yukon River, near Alaska-Canada boundary, Yukon, Canada. (Type: U.S.N.M., No. 19909/35320.)

*Range.* East-central Alaska from Tanana and head of Toklat River, east into Canada in Yukon River region to Camp Davidson and Fortymile (near Alaska-Yukon boundary), Mayo Lake\* (near head of Stewart River), Selkirk\* (at junction of Pelly and Lewes Rivers), and Lapie River\* (Canol Road, Mile 132, near junction of Pelly and Ross Rivers, Rand 1944). (Y.T.)

***Glaucomys sabrinus zaphaeus* (Osgood).** ALASKA COAST FLYING SQUIRREL. *Ecureuil volant de la côte d'Alaska.*

1905. *Sciuropterus alpinus zaphaeus* Osgood, Proc. Biol. Soc. Wash., vol. 18, p. 133 (April 18, 1905).

1918. *Glaucomys sabrinus zaphaeus* Howell, North Amer. Fauna, No. 44, p. 43 (June 13, 1918).

*Type Locality.* Helm Bay, Cleveland Peninsula, southeastern Alaska. (Type: U.S.N.M., No. 136137.)

*Range.* "Southeastern Alaskan Coast adjacent to the Alexander Archipelago and north coastal British Columbia" (Cowan, 1937, p. 78). One specimen recorded from Nass River, B.C., by Howell (1918, p. 44). (B.C.)

## Family GEOMYIDAE. Pocket Gophers

### Subfamily Geomyinae

#### Genus *Thomomys* Wied<sup>1</sup>

1839. *Thomomys* Wied, Nova acta phys. med. acad. caes, Leop.-Carol., vol. 19, pt. 1, p. 377. Type, *Thomomys rufescens* Wied.

#### Subgenus *Thomomys* Wied

##### *talpoides* group

**\**Thomomys talpoides talpoides* Richardson.** RICHARDSON'S POCKET GOPHER. *Gaufre à poches de Richardson.*

1928. *Cricetus talpoides* Richardson, Zool. Journ., vol. 3, p. 518.

1857. *Thomomys talpoides* Baird, Mamm. North Amer., p. 403.

1885. *Thomomys talpoides talpoides* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 598 (1885). (Part.)

*Type Locality.* Near Fort Carlton, Saskatchewan, Canada. (See Allen, Bull. Amer. Mus. Nat. Hist., vol. 5, p. 55 (April 28, 1893), and Bailey, North Amer. Fauna, No. 39, p. 97 (Nov. 15, 1915).) (Type: In British Museum, a stuffed skin and anterior part of skull.)

*Range.* Northern Great Plains region from western edge of central Manitoba (Riding Mountain and Swan River\*), through central Saskatchewan north to Prince Albert National Park\*, and central Alberta (Edmonton\*, Elk Island National Park, Camrose) north to divide between North Saskatchewan and Athabaska Rivers drainage systems; in Saskatchewan nearly to southern border (Indian Head, Moose Jaw, Yorkton). (Alta., Man., Sask.)

<sup>1</sup>Revised by V. Bailey, Revision of the Pocket Gophers of the Genus *Thomomys*, North Amer. Fauna, No. 39, p. 136, Pls. 8, figs. 10, including 6 distribution maps (Nov. 15, 1915). See also E. A. Goldman, Remarks on Pocket Gophers, with special reference to *Thomomys talpoides*, Journ. Mamm., vol. 20, pp. 231-245 (May 14, 1939); and W. W. Dalquest and Victor B. Scheffer, Distribution and Variation in Pocket Gophers, *Thomomys talpoides* in the State of Washington, Amer. Naturalist, vol. 78, July-August, pp. 308-333, and Sept.-Oct., 1944, pp. 423-450, figs. 5.



**\**Thomomys talpoides andersoni* Goldman.** ANDERSON'S POCKET GOPHER. *Gaufre à poches d'Anderson.*

1939. *Thomomys talpoides andersoni* Goldman, Journ. Mamm., vol. 20, No. 2, pp. 235-236 (May 14, 1939).

*Type Locality.* Medicine Hat, on South Saskatchewan River, Alberta, Canada. (Type: U.S.N.M., No. 69001.)

*Range.* Valleys of South Saskatchewan River and Milk River\* in southern Alberta, Canada. Probably also in extreme northern Montana south of Milk River. (Alta.)

**\**Thomomys talpoides bullatus* Bailey.** SAGEBRUSH POCKET GOPHER. *Gaufre à poches de la sauge sauvage.*

1914. *Thomomys talpoides bullatus* Bailey, Proc. Biol. Soc. Wash., vol. 27, p. 115 (July 10, 1914).

*Type Locality.* Powderville, Custer county, Montana. (Type: U.S.N.M., No. 55159.)

*Range.* Plains of eastern Montana, northeastern Wyoming, and western South Dakota; north to Cypress Hills\*, south of Maple Creek, southwestern Saskatchewan, apparently intergrading with *T. t. andersoni* in this area. (Sask.)

**\**Thomomys talpoides fuscus* (Merriam).** BROWN POCKET GOPHER. *Gaufre brun à poches.*

1891. *Thomomys clusius fuscus* Merriam, North Amer. Fauna, No. 5, p. 70 (July 30, 1891).

1901. [*Thomomys*] *fuscus* Merriam, Proc. Biol. Soc. Wash., vol. 14, p. 111 (July 19, 1901).

*Type Locality.* Mountains at head of Big Lost River, Custer county, Idaho. (Type: U.S.N.M., No. 24267/31671.)

*Range.* The greater part of central and northern Idaho, parts of eastern Oregon and Washington, western Montana, and northwestern Wyoming; in British Columbia apparently confined to southern parts of the Monashee Range near the International Boundary (49th parallel), from east side of Okanagan Valley (Osoyoos-Bridgesville Summit\*), to Kettle River (Cascade\*, Midway\*, Myer's Creek\*, Westbridge\*), and Columbia River Valley (Rossland\*, Trail\*, and near mouth of Pend-d'Oreille River\*). (B.C.)

**\**Thomomys talpoides incensus* Goldman.** SHUSWAP POCKET GOPHER. *Gaufre à poches de Shuswap.*

1939. *Thomomys talpoides incensus* Goldman, Journ. Mamm., vol. 20, No. 2, pp. 240-241 (May 14, 1939).

*Type Locality.* Shuswap, Yale district, British Columbia. (Type: U.S.N.M., No. 67096.)

*Range.* Thompson River Valley (Ashcroft, Kamloops), and South Thompson River (Shuswap\*), non-typical intergradation shown at north end of Okanagan Lake. (B.C.)

**\**Thomomys talpoides loringi* Bailey.** LORING'S POCKET GOPHER. *Gaufre à poches de Loring.*

1914. *Thomomys fuscus loringi* Bailey, Proc. Biol. Soc. Wash., vol. 27, p. 118 (July 10, 1914).

1939. *Thomomys talpoides loringi* Goldman, Journ. Mamm., vol. 20, p. 234 (May 14, 1939).

*Type Locality.* South Edmonton, Alberta, Canada. (Type: U.S.N.M., No. 68746.)

*Range.* Known only from Edmonton and Moose Mountain\*, Alberta. (Alta.)



\***Thomomys talpoides medius** Goldman. KOOTENAY LAKE POCKET GOPHER. *Gaufre à poches du lac Kootenay*.

1939. *Thomomys talpoides medius* Goldman, Journ. Mamm., vol. 20, No. 2, p. 241 (May 14, 1939).

*Type Locality.* Silver King mine, summit of Toad Mountain, 6 miles south of Nelson, West Kootenay district, British Columbia. (Type: U.S.N.M., No. 66653.)

*Range.* Vicinity of type locality, southwest arm of Kootenay Lake; limits of range undetermined. A single immature specimen in N.M.C. collection from Ward's Ferry\* (Bonnington, on Kootenay River about 10 miles below Nelson) collected by Wm. Spreadborough, July 2, 1890, is provisionally referred to *medius*. (B.C.)

\***Thomomys talpoides rufescens** Wied. DAKOTA POCKET GOPHER. *Gaufre à poches du Dakota*.

1839. *Thomomys rufescens* Wied, Nova acta phys. med. acad. caes. Leop.-Carol., vol. 19, pt. 1, p. 378.

1915. *Thomomys talpoides rufescens* Bailey, North Amer. Fauna, No. 39, p. 98 (Nov. 15, 1915).

*Type Locality.* "The Minnetaree Village," now Old Fort Clark, Oliver county, North Dakota (about 6 miles south of Stanton, on the west side of Missouri River). (Type specimen in American Museum of Natural History, N.Y. Collected by Maximilian, Prinz zu Wied, author of Reise in das Innere Nord-America in den Jahren 1832 bis 1835, Coblenz, 1839 (1841).)

*Range.* Greater part of North Dakota and eastern South Dakota; in Canada east to east side Red River Valley (LaBroquerie and Marchand) in southern Manitoba, north to Selkirk Settlement, Aweme\*, Carberry, Oak Lake, Pembina River, Spruce Woods Forest Reserve, to Lake Dauphin; and in southeastern Saskatchewan (Glen Ewen\*, and Red Fox Lake northeast of Kendal). (Man., Sask.)

\***Thomomys talpoides saturatus** Bailey. CŒUR D'ALENE POCKET GOPHER. *Gaufre brun de Cœur d'Alene*.

1914. *Thomomys fuscus saturatus* Bailey, Proc. Biol. Soc. Wash., vol. 27, p. 117 (July 16, 1914).

1939. *Thomomys talpoides saturatus* Goldman, Journ. Mamm., vol. 20, p. 234 (May 14, 1939).

*Type Locality.* Silver, near Saltese, Cœur d'Alene Mountains, Missoula county (now Mineral county), Montana. (Type: U.S.N.M., No. 22781/40885.)

*Range.* Higher parts of the Cœur d'Alene Mountains in northwestern Montana and northern Idaho, north into the southern ranges of the Selkirks in southeastern British Columbia near the International Boundary (Goatfell\*, altitude 2,940 feet, on eastern base of Moyie Range, near Moyie River, about 8 miles north of Idaho boundary, 1 specimen; Linklater Creek\*, altitude about 2,400 feet, in foothills of Purcell Range on west side of Kootenay River northwest of Newgate, near the Montana boundary, 11 specimens). (B.C.)

#### Genus *Geomys* Rafinesque<sup>1</sup>

1817. *Geomys* Rafinesque, Amer. Monthly Magazine, vol. 2, p. 45, November 1817. Type, *Geomys pinetis* Rafinesque (= *Mus tuza* Barton).

#### *bursarius* group

\***Geomys bursarius** (Shaw). MISSISSIPPI VALLEY POCKET GOPHER. *Gaufre à poches des Prairies*.

1800. *Mus bursarius* Shaw, Trans. Linn. Soc., vol. 5, p. 227.

1829. *Geomys bursarius* Richardson, Fauna Boreali-Americana, vol. 1, p. 203.

*Type Locality.* Unknown; somewhere in the upper Mississippi Valley.

<sup>1</sup> Revised by Merriam, North Amer. Fauna, No. 8, pp. 109-145 (Jan. 31, 1895).



*Range.* Upper Mississippi Valley south to eastern Kansas, southeastern Missouri, and southern Illinois; east nearly to Lake Michigan; west in Nebraska and the Dakotas to the 98th or 99th meridian; north along the Red River valley in eastern North Dakota and northwestern Minnesota to the 49th parallel. Bailey (1926, North Amer. Fauna, No. 49, p. 126) stated that in 1916 he took *Geomys* just across the Red River from Pembina, North Dakota, and that specimens had been taken at Emerson just north of the Manitoba line. The species was definitely added to the Manitoba and Canadian list of mammals by J. Dewey Soper who trapped ten specimens May 15-17, 1943, at a point 2.1 miles north of the International Boundary and 11.5 miles east-northeast of Emerson (sec. 14-1-4-W) (Can. Field-Nat., vol. 58, No. 3, pp. 71-72 (Aug. 28, 1944)). Two specimens were donated to the N.M.C. (Man.)

Family HETEROMYIDAE. Pocket Mice and Rats.

Genus *Perognathus* Wied<sup>1</sup>. Pocket Mice

1939. *Perognathus* Wied, Nova acta phys. med. acad. caes. Leop.-Carol., vol. 19, pt. 1, p. 368  
Type, *Perognathus fasciatus* Wied.

Subgenus *Perognathus* Wied

*fasciatus* group

\**Perognathus fasciatus fasciatus* Wied. MAXIMILIAN'S POCKET MOUSE. *Mulot à poches de Maximilien.*

1839. *Perognathus fasciatus* Wied, Nova acta phys. med. acad. caes. Leop.-Carol., vol. 19, pt. 1, p. 369.

1885. *Perognathus fasciatus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 599 (1885). (Part.)

1912. *Perognathus fasciatus fasciatus* Miller, List North Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 79 (Dec. 31, 1912).

*Type Locality.* Upper Missouri River near its junction with the Yellowstone, northwestern North Dakota. (Type not known. Topotype in U.S.N.M., No. 3865/4445.)

*Range.* Upper Sonoran and Transition zones of northwestern Wyoming and northwestern South Dakota, western North Dakota and eastern Montana; northward into southwestern Manitoba (Aweme\*, Oak Lake\*, Treesbank, and junction of Antler and Souris Rivers\*); probably also in parts of southeastern Saskatchewan, as the U.S.N.M. has specimens from Frenchman River near the southern Saskatchewan boundary. (Man., Sask.?)

†\**Perognathus parvus laingi* Anderson. ANARCHIST MOUNTAIN POCKET MOUSE. *Mulot à poches du mont Anarchiste.*

1932. *Perognathus laingi* Anderson, Nat. Mus., Canada, Ann. Rept. 1931, pp. 100-104 (Nov. 24, 1932).

*Type Locality.* Anarchist Mountain, near Osoyoos-Bridesville summit, about 8 miles east of Osoyoos Lake, British Columbia, at about 3,500 feet altitude, latitude 49° 08' N., longitude 119° 32' W. (Type: N.M.C., No. 9200.)

*Range.* Known only from 11 specimens from type locality, and 3 examined from collection of Allan Cecil Brooks taken in foothills east of Okanagan Landing at altitude of about 2,500 feet. All were taken in Dry Transition zone habitat at higher elevation than that occupied by *P. p. lordi* in this region. (B.C.)

\**Perognathus parvus lordi* (Gray). LORD'S POCKET MOUSE. *Mulot à poches de Lord.*

1868. *Abromys lordi* Gray, Proc. Zool. Soc. London, p. 202.

1889. *Perognathus lordi* Merriam, North Amer. Fauna, No. 1, p. 28 (Oct. 25, 1889).

1894. *Perognathus lordi* Rhoads, Proc. Acad. Nat. Sci. Phila., 1893, p. 405 (Jan. 30, 1894).

*Type Locality.* Southern British Columbia, Canada. (Type: Br. Mus. Nat. Hist.)

<sup>1</sup>Revised by C. H. Merriam, Prelim. Revision of the North American Pocket Mice, North Amer. Fauna, No. 1, pp. 1-36, Pls. 4 (Oct. 25, 1889); and W. H. Osgood, Revision of the Pocket Mice of the Genus *Perognathus*, North Amer. Fauna, No. 18, pp. 1-72, figs. 15, Pls. 4 (Sept. 20, 1900).



*Range.* Upper Sonoran and Transition zones of the plains of Columbia River, Washington, and suitable adjacent territory in southern British Columbia, Okanagan River (Oliver\*, Osoyoos\*), Okanagan Lake (Okanagan Landing and Vernon); lower Kettle River (Midway\*); lower Similkameen Valley (Paul Terebasket Creek\* near Keremeos); north to Thompson River (Ashcroft and Kamloops). (B.C.)

### Genus *Dipodomys* Gray.<sup>1</sup> Kangaroo Rats

1841. *Dipodomys* Gray, Ann. and Mag. Nat. Hist., vol. 7, p. 521 (August 1841). Type, *Dipodomys phillipsii* Gray.  
 1867. *Perodipus* Fitzinger, Sitzungsber. math-nat. Classe, k. Akad. Wissensch. Wien, vol. 56, Abth. 1, p. 126. Type, *Dipodomys agilis* Gambel. For status, See Grinnell, Proc. Biol. Soc. Wash., vol. 32, p. 203 (Dec. 31, 1919).  
 1890. *Dipodops* Merriam, North Amer. Fauna, No. 3, p. 71 (Sept. 11, 1890). Type, *Dipodomys agilis* Gambel.

#### *ordii* group

\****Dipodomys ordii terrosus*** Hoffmeister. MONTANA KANGAROO RAT. *Rat kangourou du Montana*.

1917. *Perodipus ordii luteolus* Goldman, Proc. Biol. Soc. Wash., vol. 30, p. 112 (May 23, 1917). Casper, Natrona county, Wyoming. (In part.)  
 1921. *Dipodomys ordii luteolus* Grinnell, Journ. Mamm., 2:1, p. 96 (May 2, 1921). (In part.)  
 1942. *Dipodomys ordii terrosus* Hoffmeister, Proc. Biol. Soc. Wash., vol. 55, pp. 165-167 (Dec. 31, 1942).

*Type Locality.* Yellowstone River, 5 miles west of Forsyth, 2,750 feet, Rosebud county, Montana. (Type: M.V.Z., No. 93447.)

*Range.* Eastern and southern Montana, and casually in southwestern Saskatchewan and southeastern Alberta. Only 3 Canadian records of *D. ordii* have been reported. Two specimens from Saskatchewan have been examined, one caught by dog near Shackleton, 45-50 miles northwest of Swift Current (Prov. Mus., Regina, No. 3188) in 1933; and one found dead on road near Tompkins\*, about 50 miles west of Swift Current and about 50 miles east of Maple Creek in 1934 (N.M.C., No. 12672). Another alcoholic specimen taken near Medicine Hat, Alberta, in 1931, in Biological Survey collection, Wash., was kindly reported to us by Dr. H. H. T. Jackson. All were referred to *D. o. luteolus* at the time, but comparison of the Tompkins specimen with a *luteolus* specimen from Sun, Wyoming, indicates that the Canadian specimens are referable to the more northern form *terrosus*, which was described later. (Alta., Sask.)

### Family CASTORIDAE. Beavers

#### Genus *Castor* Linnaeus<sup>2</sup>

1759. *Castor* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 58. Type, *Castor fiber* Linnaeus.

\****Castor canadensis canadensis*** Kuhl. CANADA BEAVER. *Castor du Canada*.

1820. *Castor canadensis* Kuhl., Beitrage z. Zoologie, p. 64.  
 1885. *Castor fiber* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885).  
 1890. *Castor canadensis* Merriam, North Amer. Fauna, No. 3, p. 59 (Sept. 11, 1890).

*Type Locality.* Hudson Bay. Type not known.

*Range.* Originally in most wooded parts of central Canada from western Quebec\*, Ontario\* north to James Bay and Hudson Bay, eastern and northern

<sup>1</sup>A "Revised list of the species in the genus *Dipodomys*," by Joseph Grinnell, Journ. Mamm., vol. 2, pp. 94-97 (May 2, 1921), includes 60 species and subspecies of kangaroo rats under 9 groups in the genus *Dipodomys*. The genus is restricted to the drier parts of western North America, and after examination of over 2,800 skins with skulls Grinnell considered 33 different forms to occur in the State of California. Only one form is known to occur in Canada but more extended investigations in some of the drier areas in southern Alberta and Saskatchewan may extend the known range to some extent.

<sup>2</sup>See Taylor, W. P., The Status of the Beavers of Western North America, with a Consideration of the Factors in their Speciation, Univ. California Publ. Zool., vol. 12, No. 15, pp. 413-495, figs. 16 (March 20, 1916); also Benson, S. B., A New Race of Beaver from British Columbia, Journ. Mamm., vol. 14, pp. 320-325, figs. 6 (Nov. 13, 1933) (for comparison of north-western Beavers); Bailey, V., and Douth, J. K., Two New Beavers from Labrador and New Brunswick, Journ. Mamm., vol. 23, pp. 86-88 (February 14, 1942) (for comparison of eastern beavers).



Manitoba\*, central and northern Saskatchewan, northern Alberta\*, northeastern British Columbia, and western part of Mackenzie district to Mackenzie delta, and northern Yukon. During recent years re-established in many parts of its former range. (Alta., B.C., Man., N.W.T., Ont., P.Q., Sask.)

**\**Castor canadensis acadicus* Bailey and Douth.** NEW BRUNSWICK BEAVER. *Castor du Nouveau-Brunswick.*

1942. *Castor canadensis acadicus* Bailey and Douth, Journ. Mamm. 23:1, pp. 87-88 (Feb. 14, 1942).

*Type Locality.* Nipisiguit River, New Brunswick, Canada. (Type: U.S.N.M., No. 174525.)

*Range.* New Brunswick, Nova Scotia, southern and central Quebec, north at least to Lake Mistassini\*, south to Adirondacks in New York, and originally probably in Maine and Vermont. (N.B., N.S., P.Q.)

**\**Castor canadensis belugae* Taylor.** NORTHWESTERN COAST BEAVER. *Castor de la côte Nord-ouest.*

1916. *Castor canadensis belugae* Taylor, Univ. Calif. Publ. Zool., vol. 12, p. 429 (March 20, 1916).

*Type Locality.* Beluga River, Cook Inlet region, Alaska. (Type: M.V.Z., No. 4224.)

*Range.* "From the Cook Inlet region of Alaska south along the coast to southern British Columbia" (Benson, 1933, p. 324); specimens referred to *belugae*: 16 from Alaska (including the type), 29 from the region of the lower Stikine River in British Columbia (approaching *sagittatus*), 5 from Anahim Lake near the head of Dean Inlet (also approaching *sagittatus*), and 3 from west branch of Homathko River (northeast of Bute Inlet, opposite Vancouver Island (ibid., pp. 324-325). The N.M.C. has one skull from Stui\*, near head of Bella Coola River, that is apparently referable to this form. (B.C.)

***Castor canadensis labradorensis* Bailey and Douth.** LABRADOR BEAVER. *Castor du Labrador.*

1942. *Castor canadensis labradorensis* Bailey and Douth, Journ. Mamm., vol. 23, No. 1, pp. 86-87 (Feb. 14, 1942).

*Type Locality.* Hamilton River, Labrador, 5 miles above Grand Falls. (Type: Carnegie Museum, Pittsburgh, No. 17875.)

*Range.* Eastern Labrador, in the valleys of Hamilton and Paradise Rivers, which drain eastward into the Atlantic Ocean. (Labr.)

**\**Castor canadensis michiganensis* Bailey.** MICHIGAN BEAVER. *Castor du Michigan.*

1913. *Castor canadensis michiganensis* Bailey, Proc. Biol. Soc. Wash., vol. 26, p. 192 (Oct. 23, 1913).

*Type Locality.* Tahquamenaw River (5 miles above falls), Luce county, Michigan. (Type: U.S.N.M., No. 170561, Biol. Surv. coll.)

*Range.* Northern Michigan and southern part of Algoma district, Ontario (Pancake Bay\*), east of Lake Superior, Canada. (Ont.)

**\**Castor canadensis missouriensis* Bailey.** MISSOURI RIVER BEAVER. *Castor de la rivière Missouri.*

1919. *Castor canadensis missouriensis* Bailey, Journ. Mamm., vol. 1, p. 32 (Nov. 23, 1919).

*Type Locality.* Apple Creek, 7 miles east of Bismarck, Burleigh county, North Dakota. (Type: U.S.N.M., No. 205763, Biol. Surv. coll.)

*Range.* Missouri River drainage from Nebraska north and west to Montana; in Canada found only in extreme southern parts of Alberta and Saskatchewan (Battle Creek\* and Lonesome Butte\*), draining into Missouri River. (Alta., Sask.)



**Castor canadensis leucodontus** Gray. VANCOUVER ISLAND BEAVER. *Castor de l'île de Vancouver.*

1869. *Castor canadensis leucodonta* Gray, Ann. and Mag. Nat. Hist., ser. 4, vol. 4, p. 293 (Oct. 1869).  
 1907. *Castor canadensis leucodontus* Osgood, Proc. Biol. Soc. Wash., vol. 20, p. 47 (April 18, 1907). Refers type to Vancouver Island, but includes beaver of northwest coast with this form.  
 1916. *Castor canadensis leucodonta* Taylor, Univ. Calif. Publ. Zool., vol. 12, No. 15, p. 440 (March 20, 1916). Restricted to Vancouver Island.  
 1933. *Castor canadensis leucodontus* Benson, Journ. Mamm., vol. 14, p. 320 (Nov. 13, 1933).

*Type Locality.* Vancouver Island, British Columbia, Canada. (Based on 3 skulls sent to British Museum but no definite type named.)

*Range.* Restricted to Vancouver Island, British Columbia. (B.C.)

**Castor canadensis pacificus** Rhoads. PACIFIC BEAVER. *Castor du Pacifique.*

1898. *Castor canadensis pacificus* Rhoads, Trans. Amer. Philos. Soc., n.s., vol. 19, p. 422 (Sept. 1898).  
 1907. *Castor canadensis leucodontus* Osgood, Proc. Biol. Soc. Wash., vol. 20, pp. 47-48 (April 18, 1907). (In part.)  
 1916. *Castor canadensis pacificus* Taylor, Univ. Calif. Publ. Zool., vol. 12, No. 15, pp. 442-446 (March 20, 1916). Restricts range of *pacificus* to mainland of British Columbia and Washington.  
 1933. *Castor canadensis pacificus* Benson, Journ. Mamm., vol. 14, p. 320 (Nov. 13, 1933).

*Type Locality.* Lake Keechelus, Cascade Mountains, Kittitas county, Wash. (Type: Coll. of S. N. Rhoads, No. 1077.)

*Range.* Columbia River drainage in Oregon (Bailey, Mamm. Oregon, North Amer. Fauna, No. 1936, pp. 218-222), in Washington from Pacific Ocean east to Spokane (Taylor and Shaw, Land Mamm. Washington, 1929, p. 21), and for an undetermined distance northward in southwestern British Columbia. Benson (1933, p. 324) considers that *pacificus* of the Columbia drainage system probably intergrades with *sagittatus* in south-central British Columbia. (B.C.)

**\*Castor canadensis sagittatus** Benson. BRITISH COLUMBIA INTERIOR BEAVER. *Castor de la Colombie-Britannique centrale.*

1933. *Castor canadensis sagittatus* Benson, Journ. Mamm., vol. 14, No. 3, pp. 320-325 (Nov. 13, 1933).

*Type Locality.* Indianpoint Creek, elevation 3,200 feet, 16 miles northeast of Barkerville, British Columbia. (Type: M.V.Z., No. 43906.)

*Range.* Interior of British Columbia from southern border of the province (Newgate\* on Kootenay River near northwestern Montana boundary, and Meadow Creek\* near Yahk northeast of the Montana-Idaho corner), north to Cariboo Range (Indianpoint Lake, Isaacs Lake, and other points in Barkerville region, South Murphy Lake\*), Finlay River (Fort Grahame\*, Wistaria\* near Burns Lake, Sinhut Lake\* near Vanderhoof), north to Liard River (Lower Liard Crossing\*) and probably parts of southeastern Yukon; intergrades with *belugae* in northwestern parts of its range, and probably with *pacificus* farther south. Davis (1939, Recent Mammals Idaho, p. 274) provisionally refers one subadult skull from Coolin, Bonner county, northern Idaho, to *sagittatus*, and the same form probably occurs in the Kootenay National Forest in extreme northwestern Montana. (B.C., Y.T.?)

**Castor caecator** Bangs. NEWFOUNDLAND BEAVER. *Castor de Terre-Neuve.*

1913. *Castor caecator* Bangs, Bull. Mus. Comp. Zool., vol. 54, p. 513 (July 1913).

*Type Locality.* Near Bay St. George, Newfoundland. (Type: M.C.Z., No. 6979, coll. E. A. and O. Bangs.)

*Range.* Restricted to the island of Newfoundland. (Nfld.)



## Superfamily MUROIDAE

## Family CRICETIDAE

## Subfamily Cricetinae

Genus *Onychomys* Baird.<sup>1</sup> Grasshopper Mice

1857. *Onychomys* Baird, Mamm. North Amer., p. 458. Type, *Hypudaeus leucogaster* Wied.

\****Onychomys leucogaster leucogaster*** (Wied). MAXIMILIAN'S GRASSHOPPER MOUSE. *Mulot sauterelle de Maximilien*.

1841. *Hypudaeus leucogaster* Wied, Reise in das innere Nord-America, vol. 2, p. 99.

1857. *Onychomys leucogaster* Baird, Mamm. N. Amer., p. 459.

1885. *Hesperomys leucogaster* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 597 (1885).

1885. *Onychomys leucogaster* var. *pallidus* Herrick, Geol. and Nat. Hist. Surv. Minnesota, 13th Ann. Rept. (1884), p. 183. Lake Traverse, near sources of the Minnesota and Bois des Sioux Rivers, South Dakota.

1912. *Onychomys leucogaster leucogaster* Miller, List N. Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 127 (Dec. 31, 1912).

*Type Locality.* Mandan Indian village, near Fort Clark, Missouri River, North Dakota; near site of present town of Stanton, Mercer county, North Dakota.

*Range.* Mostly in prairie region of eastern half of North Dakota, west to Minot and Fort Clark, extending slightly into western edge of Minnesota and northeastern South Dakota; northward into southwestern Manitoba (Oak Lake\*), north to border of Riding Mountain National Park; intergrading with *O. l. missouriensis* in region of Manitoba-Saskatchewan boundary. (Man., Sask.)

\****Onychomys leucogaster missouriensis*** (Audubon and Bachman). AUDUBON'S GRASSHOPPER MOUSE. NORTHERN GRASSHOPPER MOUSE. *Mulot sauterelle d'Audubon*. *Mulot à ventre blanc du Nord*.

1851. *Mus missouriensis* Audubon and Bachman, North Amer. Quadr., vol. 2, p. 327, Pl. c.

1862. *Mus missouriensis* Wied, Verz, der auf seiner Reise Nord-Am. beob. Säug., p. 161, in synonymy.

1914. *Onychomys leucogaster missouriensis* Hollister, Proc. U.S. Nat. Mus., vol. 47, p. 438 (Oct. 29, 1914).

*Type Locality.* Fort Union, near present town of Buford, Williams county, North Dakota. (Type not known.)

*Range.* Western North Dakota, northeastern Wyoming, eastern and northern Montana; north to southeastern Alberta (Calgary, Medicine Hat, Little Sandhill Creek\*, near Steveville) and southern Saskatchewan (Carlton, Dundurn, Indian Head\*, Last Mountain Lake\*, Osler, Weyburn, Wood Mountain, and east of Frenchman River\*). Chiefly in Arid Transition and Upper Sonoran life zones. (Alta., Sask.)

Genus *Reithrodontomys* Giglioli.<sup>2</sup> American Harvest Mice

1874. *Reithrodontomys* Giglioli, Boll. Soc. Geogr. Ital., Roma, vol. 11, p. 326 (May-July, 1874). Type, by subsequent selection (Howell, North Amer. Fauna, No. 36, p. 13, June 5, 1914), *Reithrodontomys megalotis* Baird.

<sup>1</sup>Revised by N. Hollister, A Systematic Account of the Grasshopper Mice, Proc. U.S. Nat. Mus. vol. 47, pp. 427-489, 1 Pl. (Oct. 29, 1914).

<sup>2</sup>Revised by A. H. Howell, Revision of the American Harvest Mice (Genus *Reithrodontomys*), North Amer. Fauna, No. 36, pp. 1-97, Pls. 7, maps 6 (June 5, 1914).



Subgenus *Reithrodontomys* Giglioli*megalotis* group

***Reithrodontomys megalotis nigrescens* Howell.** DUSKY HARVEST MOUSE. *Souris foncée de la moisson.*

1914. *Reithronomys megalotis nigrescens* Howell, North Amer. Fauna, No. 36, p. 52 (June 5, 1914).

*Type Locality.* Payette, Canyon county, Idaho. (Type: U.S.N.M., No. 201616.)

*Range.* Eastern Oregon and eastern Washington and western Idaho; south to Bieber, California; and north to lower Okanagan Valley in British Columbia (2 specimens, from Osoyoos and Penticton; Holland, The Murrelet, vol. 23, No. 2, p. 60, 1942). (B.C.)

Genus *Peromyscus* Gloger.<sup>1</sup> White-footed Mice

1841. *Peromyscus* Gloger, Gemeinn. Hand.-u. Hilfsbuch d. Naturgesch., vol. 1, p. 95. Type, *Peromyscus arboreus* Gloger=*Mus sylvaticus noveboracensis* Fischer.

Subgenus *Peromyscus* Gloger<sup>2</sup>

1894. *Trinodontomys* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 257 (Oct. 1894). Type, *Sitomys insolatus* Rhoads=*Hesperomys sonoriensis* LeConte.

*maniculatus* group

**\**Peromyscus maniculatus maniculatus* (Wagner).** LABRADOR WHITE-FOOTED MOUSE. *Souris à pattes blanches du Labrador.*

1845. *Hesperomys maniculatus* Wagner, Weigmann's Arch. f. Naturg., XI, vol. 1, p. 148.

1877. [*Hesperomys*] *arcticus* Coues, Monogr. North Amer. Rodentia, pp. 61 and 67. (Labrador.) (Type: U.S.N.M., No. 3924.)

1877. [*Hesperomys*] *bairdii* Coues, Monogr. North Amer. Rodentia, pp. 61 and 67. (Labrador.) Not *Mus bairdii* Hoy and Kennicott, 1857. (Type: U.S.N.M., No. 3925.)

1897. *Peromyscus canadensis umbrinus* Miller, Proc. Boston Soc. Nat. Hist., vol. 28, p. 23 (April 30, 1897). (Peninsula Harbour, north shore of Lake Superior, Ontario, Canada.) (Type, collection of Gerrit S. Miller, Jr., No. 4054.)

1912. *Peromyscus maniculatus maniculatus* Miller, List North Amer. Land Mamm., 1911, U.S.N.M., Bull 79, p. 142 (Dec. 31, 1912).

*Type Locality.* The Moravian Settlements in Labrador. Supposed type in Zoologischer Staats-Sammlung, Munich, Bavaria, collected in 1844, was examined by Osgood (1909, p. 41) and specimens from Nain used in his diagnosis.

*Range.* From east end of Hudson Strait (Port Burwell, P.Q.\*) south along the Labrador coast to Strait of Belle Isle, west through Hudsonian zone to southeast side of Hudson Bay, and around James Bay to west side of Hudson Bay; south to southern border of Hudsonian zone in Quebec and northern Ontario to north shore of Lake Superior. (Ont., P.Q., Labr.)

**\**Peromyscus maniculatus abietorum* (Bangs).** MARITIME WHITE-FOOTED MOUSE. *Souris à pattes blanches des Maritimes.*

1896. *Peromyscus canadensis abietorum* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 49 (March 9, 1896).

1909. *Peromyscus maniculatus abietorum* Osgood, North Amer. Fauna, No. 28, p. 45 (April 17, 1909).

*Type Locality.* James River, Nova Scotia, Canada. (Type: M.C.Z., No. 2205.)

<sup>1</sup>Revised by Osgood, W. H., Revision of the Mice of the American genus *Peromyscus*, North Amer. Fauna, No. 28, (1909), pp. 285, Pls. 8, figs. 12 (April 17, 1909). See also McCabe, T. T., and Cowan, Ian McTaggart, *Peromyscus maniculatus macrorhinus* and the Problem of Insularity, Trans. Roy. Can. Inst., vol. 25, pt. 2, pp. 117-215, Pl. 1, figs. 8 (Feb., 1945), for discussion of age and evolution of habitat, geological background, topography, climate, flora, salt-water barriers, and faunal environment, and the meaning of the geographic patterns, based on a collection of 993 specimens of *Peromyscus* collected by the authors and a considerable number obtained by loan from museums and collectors.

<sup>2</sup>Revised by Osgood, W. H., op. cit. pp. 33-218 (April 17, 1909).



*Range.* Nova Scotia\* (including Cape Breton Island\*), New Brunswick\* (except Grand Manan Island), Prince Edward Island\*, Gaspé Peninsula\* and south shore of St. Lawrence in province of Quebec as far west as Rivière-du-Loup; south to central Maine. (N.B., N.S., P.E.I., P.Q.)

**\*Peromyscus maniculatus algidus** Osgood. YUKON WHITE-FOOTED MOUSE. *Souris à pattes blanches du Yukon.*

1909. *Peromyscus maniculatus algidus* Osgood, North Amer. Fauna, No. 28, p. 56 (April 17, 1909).

*Type Locality.* Head of Lake Bennett (site of old Bennett City), British Columbia, Canada. (Type: U.S.N.M., No. 130013.)

*Range.* Southern Alaska near head of Lynn Canal (Haines, Skagway, White Pass), northwestern British Columbia west of northern part of Coast Range (Bennett and Cheonnee Mountains), and southwestern Yukon from Lake Bennett to lower part of Lewes River (Lake Tagish, Whitehorse) and headwaters of Alsek River (Lake Dezadeash\*, 60 miles west of Whitehorse). (B.C., Y.T.)

**‡Peromyscus maniculatus alpinus** Cowan. SELKIRK DEER MOUSE. SELKIRK WHITE-FOOTED MOUSE. *Souris à pattes blanches des Selkirks.*

1937. *Peromyscus maniculatus alpinus* Cowan, Proc. Biol. Soc. Wash., vol. 50, pp. 215-216 (Dec. 28, 1937).

*Type Locality.* Mount Revelstoke, 19 miles northeast of Revelstoke, British Columbia, at 6,000 feet altitude. (Type: B.C. Prov. Mus., No. 2266.)

*Range.* Definitely known only from vicinity of type locality, and probably does not occur outside of the Selkirk Range. (B.C.)

**\*Peromyscus maniculatus angustus** Hall. LITTLE VANCOUVER ISLAND WHITE-FOOTED MOUSE. *Petite souris à pattes blanches de l'île de Vancouver.*

1932. *Peromyscus maniculatus angustus* Hall, Univ. Calif. Publ. Zool., vol. 38, No. 12, pp. 422-423 (Nov. 8, 1932).

*Type Locality.* Beaver Creek, 15 miles northwest of Alberni, Vancouver Island, British Columbia. (Type: M.V.Z., No. 12482.)

*Range.* Restricted to Vancouver Island, on seacoast and at lower levels in the interior, along the east coast as far north as Sayward\*, and on west coast to Nootka Sound\*. (B.C.)

**Peromyscus maniculatus anticostiensis** Moulthrop. ANTICOSTI ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches de l'île d'Anticosti.*

1937. *Peromyscus maniculatus anticostiensis* Moulthrop, Scientific Publications of the Cleveland Museum of Natural History, vol. 5, No. 3. Issued December 4, 1937.

*Type Locality.* "From Fox Bay at the eastern end of Anticosti Island, Gulf of St. Lawrence, Quebec." (Type: Cleveland Mus. Nat. Hist., No. 12128.)

*Range.* "Known only from the type locality, but undoubtedly ranging over all of Anticosti since the Fox Basin region is typical of the entire island." (P.Q.)

**\*Peromyscus maniculatus argentatus** Copeland and Church. GRAND MANAN WHITE-FOOTED MOUSE. *Souris à pattes blanches de l'île Grand Manan.*

1906. *Peromyscus canadensis argentatus* Copeland and Church, Proc. Biol. Soc. Wash., vol. 19, p. 122 (Sept. 6, 1906).

1909. *Peromyscus maniculatus argentatus* Osgood, North Amer. Fauna, No. 29, p. 46 (April 17, 1909).

*Type Locality.* Grand Harbour, island of Grand Manan, New Brunswick, Canada. (Type: coll. of Manton Copeland, No. 168.)

*Range.* Restricted to Island of Grand Manan\*, New Brunswick, Canada. (N.B.)



**\*Peromyscus maniculatus artemisiae** (Rhoads). SAGEBRUSH WHITE-FOOTED MOUSE. *Souris à pattes blanches de la sauge sauvage.*

1894. *Sitomys americanus artemisiae* Rhoads, Proc. Acad. Nat. Sci., Phila., p. 260 (Oct. 1894).  
 1899. *Peromyscus texanus subarcticus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 15 (March 4, 1899). Deerlodge county, Montana.  
 1909. *Peromyscus maniculatus artemisiae* Osgood, North Amer. Fauna, No. 28, p. 58 (April 17, 1909).

*Type Locality.* Ashcroft, British Columbia, Canada. (Type: A.N.S. Phila., No. 7368.)

*Range.* Southern interior of British Columbia from east slope of Cascade Mountains east along the International Boundary to extreme southwestern corner of Alberta; northward in the drier parts of interior to east-central British Columbia, intergrading with *P. m. borealis* in the northern part of the range and with *P. m. oreas* farther to the southwest, probably also with *P. m. alpinus* in parts of the Selkirks; south to northeastern Washington, northern Idaho, western Montana, and western Wyoming. Transition and Canadian zones. (Alta., B.C.)

**\*Peromyscus maniculatus austerus** (Baird). PUGET SOUND WHITE-FOOTED MOUSE. *Souris à pattes blanches du passage Puget.*

1855. *Hesperomys austerus* Baird, Proc. Acad. Nat. Sci. Phila., vol. 7, p. 336 (April 1855).  
 1899. *Peromyscus akeleyi* Elliott, Field Columb. Mus., publ. 30, zool. ser., vol. 1, p. 226 (Feb. 1, 1899). Johnson's ranch, Elwah River, Olympic Mountains, Clallam county, Wash.  
 1909. *Peromyscus maniculatus austerus* Osgood, North Amer. Fauna, No. 28, p. 63 (April 17, 1909).

*Type Locality.* Old Fort Steilacoom, Pierce county, Wash. (Type: U.S.N.M., No. 364; Osgood, 1909, p. 64.)

*Range.* Coast region of Puget Sound, Washington, to southwestern British Columbia on west side of Cascade Range from the International Boundary (Chilliwack\*, Huntingdon\*), along the Gulf of Georgia north to Powell River\*, Horseshoe Lake\*, Bute Inlet\*, and Loughborough Inlet\*; intergrading with *P. m. oreas* in the mountains back from the coast. (B.C.)

**\*Peromyscus maniculatus bairdii** (Hoy and Kennicott). MICHIGAN WHITE-FOOTED MOUSE. BAIRD WHITE-FOOTED MOUSE. *Souris à pattes blanches du Michigan.*

1857. *Mus bairdii* Hoy and Kennicott, in Kennicott, Agricultural Report, U.S. Patent Office, 1856, p. 92.  
 1885. *Hesperomys michiganensis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 597 (1885).  
 1909. *Peromyscus maniculatus bairdii* Osgood, North Amer. Fauna, No. 28, p. 79 (April 17, 1909).

*Type Locality.* Bloomington, McLean county, Illinois. (Type: A.N.S. Phila., No. 750, a doubtful type.)

*Range.* Prairie region of the upper Mississippi Valley in southern Wisconsin, Minnesota, Illinois, Indiana, eastern Ohio, Iowa, Missouri, Oklahoma, and the eastern or humid parts of Kansas, Nebraska, South Dakota, and North Dakota; north to southwestern Manitoba. Upper Austral and Transition zones, meeting the range of *P. M. gracilis* in southern Ontario\*, and the Great Plains forms (*nebrascensis* and *osgoodi*) along the border between the humid and the arid subdivisions. (Man., Ont.)

**‡\*Peromyscus maniculatus balaclavae** McCabe and Cowan. BALACLAVA ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches.*

1945. *Peromyscus maniculatus balaclavae* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 197 (Feb. 1945).

*Type Locality.* Balaclava Island, British Columbia. (Type: B.C.P.M., No. 3838.)

*Range.* Balaclava Island and Hope Island of the Gordon group adjacent to northern Vancouver Island, British Columbia. The smallest insular race encountered of the *P. m. macrorhinus* complex; 75 specimens examined by the describers. (B.C.)



**\*Peromyscus maniculatus borealis** Mearns. MACKENZIE WHITE-FOOTED MOUSE. *Souris à pattes blanches du Mackenzie.*

1890. *Hesperomys leucopus arcticus* Mearns, Bull. Amer. Mus. Nat. Hist., vol. 2, p. 285 (Feb. 21, 1890). Not *Hesperomys arcticus* Coues, 1877.

1900. *Peromyscus maniculatus arcticus* Osgood, North Amer. Fauna, No. 19, p. 33 (Oct. 6, 1900).

1911. *Peromyscus maniculatus borealis* Mearns, Proc. Biol. Soc. Wash., vol. 24, p. 102 (May 15, 1911). (Substitute for *arcticus* Mearns.)

*Type Locality.* Fort Simpson, Mackenzie, Canada. (Type: M.C.Z., No. 5555; formerly U.S.N.M., No. 4531.)

*Range.* Interior of Northwest Canada; from northern Saskatchewan north along Mackenzie River regularly at least to Fort Norman and casually to Fort Good Hope and farther north; (1 specimen taken at Herschel Island\*, Yukon, carried from Mackenzie in transport barge); west to the upper waters of the Yukon, and thence through the Liard Valley\* and upper Peace River\* region of northeastern British Columbia, and northern and central Alberta and Saskatchewan as far south as Jasper\* and Banff\* National Parks. Intergrading with *algidus* in southwestern Yukon and northwestern British Columbia, with *artemisiae* in north-central British Columbia, with *osgoodi* in central Alberta and Saskatchewan. Canadian and Hudsonian life zones. (Alta., B.C., N.W.T., Sask., Y.T.)

**‡\*Peromyscus maniculatus cancrivorus** McCabe and Cowan. TABLE ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches.*

1945. *Peromyscus maniculatus cancrivorus* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 195 (Feb. 1945).

*Type Locality.* Table Island, Queen Charlotte Sound, British Columbia. (Type: B.C.P.M., No. 2060.)

*Range.* Confined to Table Island, British Columbia. A pale insular race of the *P. m. macrorhinus* complex; 19 specimens examined by the describers. (B.C.)

**‡\*Peromyscus maniculatus doylei** McCabe and Cowan. DOYLE ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches.*

1945. *Peromyscus maniculatus doylei* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 197 (Feb. 1945).

*Type Locality.* Doyle Island (Gordon group), British Columbia. (Type: B.C.P.M., No. 3784.)

*Range.* So far as known confined to Doyle Island, adjacent to the northern tip of Vancouver Island. An insular race of the *P. m. macrorhinus* complex. Fifteen specimens examined by the describers. (B.C.)

**Peromyscus maniculatus eremus** Osgood. MAGDALEN WHITE-FOOTED MOUSE. *Souris à pattes blanches des Iles de la Madeleine.*

1909. *Peromyscus maniculatus eremus* Osgood, North Amer. Fauna, No. 28, p. 47 (April 17, 1909).

*Type Locality.* Pleasant Bay, Grindstone Island, Magdalen Islands, Quebec, Canada. (Type: U.S.N.M., No. 150223.)

*Range.* Restricted to Grindstone Island, Quebec, Canada. (P.Q.)

**Peromyscus maniculatus georgiensis** Hall. GEORGIA STRAIT WHITE-FOOTED MOUSE. *Souris à pattes blanches du détroit de Georgie.*

1938. *Peromyscus maniculatus georgiensis* Hall, Amer. Nat., vol. 72, No. 742, pp. 455-460 (Sept.-Oct. 1938).

*Type Locality.* Vananda, Texada Island, Strait of Georgia, British Columbia. (Type: M.V.Z., No. 70400.)

*Range.* Known from Savary, Texada, Lasqueti, Thormanby, and Bowen Islands in Strait of Georgia, British Columbia. (B.C.)



**\*Peromyscus maniculatus gracilis** (LeConte). LECONTE'S WHITE-FOOTED MOUSE. *Souris à pattes blanches de LeConte*.

1855. *H[esperomys] gracilis* LeConte, Proc. Acad. Nat. Sci. Phila., vol. 7, p. 442.

1893. *Sitomys americanus canadensis* Miller, Proc. Biol. Soc. Wash., vol. 8, p. 55 (June 20, 1893). Peterboro, Madison county, New York.

1909. *Peromyscus maniculatus gracilis* Osgood, North Amer. Fauna, No. 28, p. 42 (April 17, 1909).

*Type Locality*. Michigan. (Type: U.S.N.M., No. 10292/38002.)

*Range*. Northeastern United States and southern Canada from northern Minnesota east through northern Wisconsin, Michigan, Ontario, Quebec, New York, and western New England. Canadian zone of eastern Quebec as far east as Godbout on the north shore of the Gulf of St. Lawrence, and of Ontario as far west as east end of Lake Superior (Pancake Bay\*); south in Ontario to the southeast corner of Lake Huron (Port Franks). Intergrading in eastern part of its range near Maine-Quebec boundary with *abietorum*, and in northern part of its range with *maniculatus*. (Ont., P.Q.)

†**\*Peromyscus maniculatus interdictus** Anderson. BIG VANCOUVER ISLAND WHITE-FOOTED MOUSE. *Souris grande à pattes blanches de l'île de Vancouver*.

1932. *Peromyscus maniculatus interdictus* Anderson, Nat. Mus., Canada, Ann. Rept. 1931, pp. 110-112 (Nov. 24, 1932).

*Type Locality*. Forbidden Plateau, near eastern edge of Strathcona Park, north of Mount Albert Edward, about 17 miles northwest of Comox, Vancouver Island, British Columbia, at about 4,200 feet altitude; latitude 49° 42' N., longitude 125° 25' W. (Type: N.M.C., No. 11432.)

*Range*. Mountains of central and northern Vancouver Island, west to coast on Nootka Sound\*, and on northern coast of the island. (B.C.)

**Peromyscus maniculatus isolatus** Cowan. PINE ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches*.

1935. *Peromyscus sitkensis isolatus* Cowan, Univ. Calif. Publ. Zool., vol. 40, No. 13, pp. 434-437 (Nov. 14, 1935).

1945. *Peromyscus maniculatus isolatus* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 194 (Feb. 1945).

*Type Locality*. Pine Island, Queen Charlotte Sound, north end of Vancouver Island, British Columbia. (Type: Coll. of Kenneth Racey, No. 1392A.)

*Range*. Pine Island and Nigei Island, off north end of Vancouver Island. Described from specimens from type locality only, but subsequent collections made on the coastal islands have caused a revision of ideas regarding the specific characters of *P. sitkensis* and the Nigei Island specimens are now placed with Pine Island specimens as a race of *Peromyscus maniculatus*. (B.C.)

‡**\*Peromyscus maniculatus keeni** (Rhoads). QUEEN CHARLOTTE WHITE-FOOTED MOUSE. *Souris à pattes blanches de la reine Charlotte*.

1894. *Sitomys keeni* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 258 (Oct. 1894).

1909. *Peromyscus maniculatus keeni* Osgood, North Amer. Fauna, No. 28, p. 55 (April 17, 1909).

*Type Locality*. Massett, Graham Island, Queen Charlotte Islands, British Columbia, Canada. (Type: A.N.S. Phila., No. 7768.)

*Range*. Moresby and Graham (Masset\*) Islands, Queen Charlotte group, British Columbia. (B.C.)

**\*Peromyscus maniculatus macrorhinus** (Rhoads). SKEENA WHITE-FOOTED MOUSE. *Souris à pattes blanches de la Skeena*.

1894. *Sitomys macrorhinus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 259 (Oct. 1894).

1909. *Peromyscus maniculatus macrorhinus* Osgood, North Amer. Fauna, No. 28, p. 57 (April 17, 1909).

*Type Locality*. North Pacific Salmon Cannery, mouth of Skeena River, British Columbia, Canada. (Type: A.N.S. Phila., No. 8381.)



*Range.* Mainland coast and some of the adjacent islands (Revillagigedo, Woronkofski, Wrangell) of southern Alaska, and south along the northwest coast of British Columbia (Metlakatla\*, Port Simpson; lower Skeena River; Dean Channel, mouth of Dean River\*, Eucott Bay Hot Springs\*, Kimsquit\*, Port John\*, to Calvert Island\* and Rivers Inlet\*) intergrading with *oreas* in the southern part of its range and with *hylaesus* in southern Alaska. (B.C.)

‡\**Peromyscus maniculatus maritimus* McCabe and Cowan. MOORE ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches.*

1945. *Peromyscus maniculatus maritimus* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 199 (Feb. 1945).

*Type Locality.* On the largest of the Moore Islands, British Columbia (latitude 52° 38' north, and longitude 129° 28' west).

*Range.* Known only from Moore Island, British Columbia. An insular race of the *P. m. macrorhinus* complex; 28 specimens, all from the type locality, examined by the describers. (B.C.)

‡\**Peromyscus maniculatus oreas* Bangs. CASCADES WHITE-FOOTED MOUSE. *Souris à pattes blanches des montagnes Cascades.*

1898. *Peromyscus oreas* Bangs, Proc. Biol. Soc. Wash., vol. 12, p. 84 (March 24, 1898).

1909. *Peromyscus maniculatus oreas* Osgood, North Amer. Fauna, No. 28, p. 51 (April 17, 1909).

*Type Locality.* Mount Baker Range, British Columbia, Canada, near boundary of Whatcom county, Washington. Altitude, 6,500 feet. (Type: M.C.Z., No. 3696.)

*Range.* Mountains and coast of western Washington north of Columbia River and to southwestern British Columbia; near the International Boundary on western slopes of Cascades east of the coastal plain (Chilliwack Valley\*, Lihumitson Park\*), intergrading with *P. m. austerus* in some areas; in mountains from Lillooet\* to Bella Coola area (Stuie\*, Rainbow Mountains\*), and approaching the coast at Rivers Inlet\* and Kingcome Inlet\*, intergrading with *P. m. macrorhinus* on coast in the Bella Coola region. (B.C.)

\**Peromyscus maniculatus osgoodi* Mearns. OSGOOD'S WHITE-FOOTED MOUSE. NORTHERN PLAINS WHITE-FOOTED MOUSE. *Souris à pattes blanches des plaines du nord.*

1890. *Hesperomys leucopus nebrascensis* Mearns, Bull. Amer. Mus. Nat. Hist., vol. 2, p. 285. Described on p. 287 (Feb. 21, 1890). Not *Hesperomys sonoriensis* var. *nebrascensis* Coues, 1877. (In part.)

1911. *Peromyscus maniculatus osgoodi* Mearns, Proc. Biol. Soc. Wash., vol. 24, p. 102 (May 15, 1911). (Substitute for *nebrascensis* Mearns.)

*Type Locality.* Calf Creek, Custer county, Montana. (Type: A.M.N.H., No. 1200.)

*Range.* Plains and foothills along the eastern base of the Rocky Mountains from south-central Saskatchewan and southern Alberta to the Panhandle of Texas, occupying in general the eastern parts of Montana, Wyoming, and Colorado, the western Dakotas, and southern Saskatchewan\* and Alberta\*, intergrading with *borealis* toward northern border of the Plains region. Upper Sonoran and Transition zones. (Alta., Sask.)

*Peromyscus maniculatus plumbeus* C. F. Jackson. NORTH SHORE WHITE-FOOTED MOUSE. *Souris à pattes blanches de la côte nord.*

1939. *Peromyscus maniculatus plumbeus* C. F. Jackson, Proc. Biol. Soc. Wash., vol. 52, pp. 101-104 (June 5, 1939).

*Type Locality.* From Pigou River on the north shore of the Gulf of St. Lawrence, Saguenay county, Quebec. (Type: Univ. New Hampshire Mus., No. 265/332.)

*Range.* From Pigou River westward to the Bay of Seven Islands. Limits of range unknown. (P.Q.)



‡\**Peromyscus maniculatus pluvialis* McCabe and Cowan. GOOSE ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches*.

1945. *Peromyscus maniculatus pluvialis* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 199 (Feb. 1945).

*Type Locality*. Northern island of the Goose Island group (latitude 52° north, longitude 128° 31' west), British Columbia. (Type: B.C.P.M., No. 3910.)

*Range*. Confined to the type locality. An insular race of the *P. m. macrorhinus* complex; 26 specimens, all from the type locality, examined by the describers. (B.C.)

‡\**Peromyscus maniculatus rubriventer* McCabe and Cowan. RED-BELLIED WHITE-FOOTED MOUSE. *Souris à pattes blanches*.

1945. *Peromyscus maniculatus rubriventer*, McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 196 (Feb. 1945).

*Type Locality*. Ruth Island, the small westernmost member of the Hunter Island complex, British Columbia. (Type: B.C.P.M., No. 3888.)

*Range*. "Taken on Ruth, Hunter, Hunter 'B', Smythe, Townsend Reginald, and in slightly modified form on Campbell, Dufferin, and Horsfall Islands. The Hecate Island and Chatfield Island *Peromyscus*, while intermediate, are closer to this race than to *macrorhinus*" (McCabe and Cowan, op. cit., p. 196). An insular race of the *P. m. macrorhinus* complex, 248 specimens examined by the describers. (B.C.)

*Peromyscus maniculatus saturatus* Bangs. SATURNA ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches de l'île Saturna*.

1897. *Peromyscus texanus saturatus* Bangs, Amer. Nat., vol. 31, p. 75 (Jan. 1897).

1909. *Peromyscus maniculatus saturatus* Osgood, North Amer. Fauna, No. 28, p. 61 (April 17, 1909).

*Type Locality*. Saturna Island, in the Gulf of Georgia, halfway between Victoria and Vancouver City, British Columbia, Canada. (Type: M.C.Z., No. 2581.)

*Range*. Confined to Saturna Island. (B.C.)

‡\**Peromyscus maniculatus saxamans* McCabe and Cowan. DUNCAN ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches*.

1945. *Peromyscus maniculatus saxamans* McCabe and Cowan, Trans. Roy. Can. Inst., Toronto, vol. 25, pt. 2, p. 198 (Feb. 1945).

*Type Locality*. Duncan Island, British Columbia. (Type: B.C.P.M., No. 3799.)

*Range*. Duncan and Heard Islands and in slightly modified form on Bell and Hurst Islands—all of the Gordon group, British Columbia. The darkest population of the insular races of the *P. m. macrorhinus* complex with the exception of *P. m. rubriventer*; 71 specimens examined by the describers. (B.C.)

#### *sitkensis* group

*Peromyscus sitkensis prevostensis* Osgood. PREVOST ISLAND WHITE-FOOTED MOUSE. *Souris à pattes blanches de l'île Prevost*.

1901. *Peromyscus prevostensis* Osgood, North Amer. Fauna, No. 21, p. 29 (Sept. 26, 1901).

1909. *Peromyscus sitkensis prevostensis* Osgood, North Amer. Fauna, No. 28, p. 102 (April 17, 1909).

*Type Locality*. Prevost Island, Queen Charlotte group, British Columbia, Canada. (Type: U.S.N.M., No. 100818.)

*Range*. Prevost Island. (B.C.)



*leucopus* group

\***Peromyscus leucopus aridulus** Osgood. BADLANDS WHITE-FOOTED MOUSE. *Souris à pattes blanches de Badlands*.

1909. *Peromyscus leucopus aridulus* Osgood, North Amer. Fauna, No. 28, p. 122 (April 17, 1909).

*Type Locality.* Fort Custer, Yellowstone county, Montana. (Type: U.S.N.M., No. 75704.)

*Range.* Upper Sonoran zone of eastern Montana and Wyoming and the adjoining western parts of North Dakota, South Dakota, and Nebraska; probably south to Oklahoma and west to eastern Colorado; north to southeastern Alberta (Lodge Creek\*, Eagle Butte\*, and Milk River\*) and southwestern Saskatchewan (Eastend\*, Lonesome Butte\* and Rock River\*). (Alta., Sask.)

‡**Peromyscus leucopus caudatus** Smith. NOVA SCOTIA DEER MOUSE. ACADIAN DEER MOUSE. *Souris à pattes blanches de l'Acadie*.

1939. *Peromyscus leucopus caudatus* Ronald W. Smith, Proc. Biol. Soc. Wash., vol. 52, pp. 157-158 (Oct. 11, 1939).

*Type Locality.* Wolfville, Kings county, Nova Scotia. (Type: M.V.Z., No. 84535.)

*Range.* Western Nova Scotia.

\***Peromyscus leucopus noveboracensis** (Fischer). NORTHERN DEER MOUSE. *Souris à pattes blanches du Nord*.

1829. (*Mus sylvaticus*)  $\delta$  *noveboracensis* Fischer, Synopsis Mammalium, p. 318.

1897. *Peromyscus leucopus noveboracensis* Miller, Proc. Boston Soc. Nat. Hist., vol. 28, p. 22 (April 30, 1897).

1901. *Peromyscus leucopus minnesotae* Mearns, Proc. Biol. Soc. Wash., vol. 14, p. 154 (Aug. 9, 1901). Fort Snelling, Hennepin county, Minnesota.

*Type Locality.* New York. (Type: Not known to be extant.)

*Range.* Upper Austral and Transition zones of the eastern United States and Canada. Extending from southern border of Quebec along Ottawa River\*, eastern\* and southern Ontario\*, overlapping the range of *P. m. gracilis* in this region; south of the Great Lakes in southern Michigan, Wisconsin, and Minnesota, central Minnesota, thence south through the humid parts of eastern Nebraska and Kansas and eastward to the Atlantic coast, following quite closely the boundary between the Lower and Upper Austral zones on the south and that between the Transition and Canadian on the north. (Ont., P.Q.)

Genus *Neotoma* Say and Ord.<sup>1</sup> Wood Rats

1825. *Neotoma* Say and Ord, Journ. Acad. Nat. Sci. Phila., vol. 4, pt. 2, p. 345. Type, *Mus floridana* Ord.

Subgenus *Teonoma* Gray

1843. *Teonoma* Gray, List Spec. Mamm. Brit. Mus., p. 117. Type, *Myoxus drummondii* Richardson.

\***Neotoma cinerea cinerea** (Ord). GREY BUSHY-TAILED WOOD RAT. *Rat gris des bois*.

1815. *Mus cinereus* Ord, Guthrie's Geog., 2d Amer. ed., vol. 2, p. 292. "Based on the ash-coloured rat of Rocky Mountains of Lewis and Clark."

1857. *Neotoma cinerea* Baird, Mamm. North Amer., p. 499.

1885. *Neotoma cinerea* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 598 (1885). (Part.)

1903. *Teonoma cinerea acraia* Elliot, Field Columb. Mus., publ. 87, zool. ser., vol. 3, p. 247 (Dec. 1903). Hot Springs, Long Canyon, Mount Whitney, Inyo county, Calif.

1912. *Neotoma cinerea cinerea* Miller, List North Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 201 (Dec. 31, 1912).

*Type Locality.* Near Great Falls, Cascade county, Montana. (Type not known to be extant.)

<sup>1</sup>Revised by Goldman, E. A., Revision of the Wood Rats of the Genus *Neotoma*, North Amer. Fauna, No. 31, 1910 p. 124, Pls. 8 text figures (distribution maps) 14 (Oct. 1910).



*Range.* In Canada, Rocky Mountain region in southwestern Alberta (Waterton Lakes National Park\*), intergrading with *N. c. drummondii* in Banff National Park\*; in southwestern British Columbia (Morrissey\*, Newgate\*), intergrading with *occidentalis* farther west. Southward in the Rocky Mountain region in Idaho, Montana, western Wyoming, Utah, northern Arizona, and thence westward through the mountains of central Nevada to the southern part of Sierra Nevada in California. Canadian zone and down along cold cliffs and canyons well into the Transition zone. (Goldman, 1910, 95-96.) (Alta., B.C.)

‡*Neotoma cinerea drummondii* (Richardson). DRUMMOND'S BUSHY-TAILED WOOD RAT. *Rat des bois de Drummond.*

1828. *Myoxus drummondii* Richardson, Zool. Journ., vol. 3, p. 517.

1892. *Neotoma cinerea drummondi* Merriam, Proc. Biol. Soc. Wash., vol. 7, p. 25 (April 13, 1892).

1912. *Neotoma cinerea drummondii* Miller, List North Amer. Land Mamm., 1911, p. 201 (Dec. 31, 1912).

*Type Locality.* Probably near Jasper House, Alberta, Canada. See Goldman, North Amer. Fauna, No. 31, p. 99 (Oct. 19, 1910). (Type: Br. Mus. Nat. Hist., No. 42.10.7.6.)

*Range.* Rocky Mountain region of western Alberta (Jasper National Park\*) and eastern British Columbia, intergrading with *N. c. cinerea* in region of Banff National Park\*; north to Peace River district in northeastern British Columbia, and along Alaska Highway at least to Lower Liard Crossing\*; apparently intergrading with *N. c. saxamans* along the British Columbia-Yukon boundary. (Alta., B.C.)

\**Neotoma cinerea occidentalis* (Baird). WESTERN BUSHY-TAILED WOOD RAT. *Rat sombre des bois.*

1855. *Neotoma occidentalis* Baird, Proc. Acad. Nat. Sci. Phila., p. 335.

1891. *Neotoma cinerea occidentalis* Merriam, North Amer. Fauna, No. 5, p. 58 (July 30, 1891).

1899. *Neotoma c[inerea] columbiana* Elliot, Field Columb. Mus., publ. 32, zool. ser., vol. 1, p. 255 (March 1899). Ducks, British Columbia, Canada.

*Type Locality.* Shoalwater Bay, Pacific county, Wash. (Type: U.S.N.M., No. 572.)

*Range.* Pacific coast region from northern California to southwestern British Columbia (except the narrow coastal strip west of the Cascade Mountains in Oregon); British Columbia coast (Hope\*, Horseshoe Lake\*, Bute Inlet\*, Loughborough Inlet\*, north to head of Rivers Inlet\*); in interior from Vanderhoof\* south through Lillooet\*, Similkameen Valley (Keremeos\* and Princeton\*), Okanagan Valley (Osoyoos\*), and eastward to Beaverdell\*, Creston\*, and Yahk\*. (B.C.)

\**Neotoma cinerea saxamans* (Osgood). NORTHWESTERN BUSHY-TAILED WOOD RAT. *Rat des bois du Nord-ouest.*

1900. *Neotoma saxamans* Osgood, North Amer. Fauna, No. 19, p. 33 (Oct. 6, 1900).

1903. *Neotoma cinerea saxamans* Allen, Bull. Amer. Mus. Nat. Hist., vol. 19, p. 544 (Oct. 10, 1903).

*Type Locality.* Bennett City, head of Lake Bennett, British Columbia, Canada. (Type: U.S.N.M., No. 98923.)

*Range.* Western British Columbia on both sides of coast range from the north side of Rivers Inlet north to Bella Coola region (Hagensborg\*, Stuie\*), Dean Channel (Hot Springs\*, Kimsquit\*), and on east side of Coast Range from Skeena River (Hazelton\*) and Burns Lake (Wistaria\*) north to Lake Bennett; through most of southern Yukon (Teslin Lake\*) and Canol Road (Lapie River, Mile 132, near junction of Pelly and Ross Rivers\*). (B.C., Y.T.)



Subfamily **Microtinae**.<sup>1</sup> Voles and Lemmings*lemmi* groupGenus *Synaptomys* Baird.<sup>2</sup> Lemming-mice

1857. *Synaptomys* Baird, Mamm. North Amer., p. 558. Type, *Synaptomys cooperi* Baird.

Subgenus *Synaptomys* Baird

**\**Synaptomys cooperi cooperi* Baird.** COOPER'S LEMMING MOUSE. *Campagnol lemming de Cooper.*

1857. *S[ynaptomys] cooperi* Baird, Mamm. North Amer., p. 558.  
 1893. *Synaptomys stonei* Rhoads, Amer. Nat., vol. 27, p. 53 (Jan. 1893). Mays Landing, Atlantic county, N.J.  
 1896. *Synaptomys fatuus* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 47 (March 9, 1896). Lake Edward, Quebec, Canada.  
 1927. *Synaptomys cooperi cooperi* A. B. Howell, North Amer. Fauna, No. 50, p. 12 (June 30, 1927).

*Type Locality.* Unknown, probably northern New Jersey. (Type: U.S.N.M., No. 1367/3230.)

*Range.* Canadian and upper part of Transition zone in northern United States from Minnesota to New England; south to central Wisconsin and Michigan and in the Catskill Mountains to southern New York; all parts of Nova Scotia including Cape Breton Island; New Brunswick; east in Quebec to Godbout and Ste. Marguerite River; west through southwestern Quebec\* and northern Ontario\* to southeastern Manitoba (Pine Falls on Winnipeg River recorded by Green (1930, p. 69) and 2 taken by Stuart Criddle in 1912 and 1929 near Dawson, in Sandilands Forest Reserve, Manitoba). (Man., N.B., N.S., Ont., P.Q.)

Subgenus *Mictomys* Baird

1894. *Mictomys* True, Diagnoses of new North American Mammals, p. 2 (April 26, 1894). (Reprint: Proc. U.S. Nat. Mus., vol. 17, p. 242 (Nov. 15, 1894).) Type, *Mictomys innuitus* True.

**\**Synaptomys borealis borealis* (Richardson).** RICHARDSON'S LEMMING MOUSE. *Campagnol lemming de Richardson.*

1828. *Arvicola borealis* Richardson, Zool. Journ., vol. 3, p. 517.  
 1902. *Synaptomys (Mictomys) bullatus* Preble, Proc. Biol. Soc. Wash., vol. 14, p. 181 (Aug. 6, 1902). Trout Rock, near Fort Rae, Great Slave Lake, Mackenzie, Canada. (Type: U.S.N.M., No. 110632.)  
 1907. *Synaptomys borealis* Osgood, Proc. Biol. Soc. Wash., vol. 20, p. 49 (April 18, 1907).  
 1927. *Synaptomys borealis borealis* A. B. Howell, North Amer. Fauna, No. 50, p. 22 (June 30, 1943).

*Type Locality.* Fort Franklin, Great Bear Lake, Mackenzie, Canada. (Type: B.M., No. 42.10.7.10.)

*Range.* The Athabaska-Mackenzie region of Canada from west end of Great Bear Lake south to Peace River block in northeastern British Columbia and Edmonton district in central Alberta; probably also northwestern Saskatchewan, a typical specimen in N.M.C. from Brightsand Lake\*, about 65 miles north-northwest of North Battleford, Saskatchewan, taken by Wm. T. Shaw in 1933. (Alta., B.C., N.W.T., Sask.)

<sup>1</sup>Genera and subgenera revised by C. Hart Merriam, Genera and Subgenera of Voles and Lemmings, North Amer. Fauna, No. 12, p. 84, figs. 40, Pls. 3 (July 23, 1896).

<sup>2</sup>Revised by A. B. Howell, Revision of the American Lemming Mice, North Amer. Fauna, No. 50, p. 37, figs. 11, Pls. 2 (June 30, 1927). See also Anderson and Rand, A New Lemming Mouse (*Synaptomys*) from Manitoba with notes on some other forms, Can. Field-Nat., vol. 57, pp. 101-103 (Dec. 10, 1943).



†\***Synaptomys borealis artemisiae** Anderson. SIMILKAMEEN LEMMING MOUSE. *Campagnol lemming de la Similkameen*.

1932. *Synaptomys borealis artemisiae* Anderson, Nat. Mus. Canada, Ann. Rept. 1931, pp. 104-107 (Nov. 24, 1932).

*Type Locality.* Sixmile Creek (Stevenson Creek), southwest of Princeton, British Columbia, on Hope-Princeton trail, east slope of Cascade Range, about 2,400 feet altitude, latitude 49° 23' N., longitude 120° 25' W. (Type: N.M.C., No. 7952.)

*Range.* Known only from Similkameen River Valley, eastern slope of Cascade Range in British Columbia, from the dry Transition zone country near Princeton at 2,400 feet altitude, to head of Whipsaw Creek just east of the Cascade Mountains divide at 5,600 feet altitude. Probably ranges south into northern Okanogan county, Washington, along heads of Similkameen and Ashnola Rivers. (B.C.)

\***Synaptomys borealis chapmani** Allen. CHAPMAN'S LEMMING MOUSE. *Campagnol lemming de Chapman*.

1903. *Synaptomys (Mictomys) chapmani* Allen, Bull. Amer. Mus. Nat. Hist., vol. 19, p. 555 (Oct. 10, 1903).

1927. *Synaptomys borealis chapmani*, Howell, A. B., North Amer. Fauna, No. 50, 25 (June 30, 1927).

*Type Locality.* Glacier, Selkirk Range, British Columbia, Canada. (Type: A.M.N.H., No. 16908.)

*Range.* Canadian zone of southeastern British Columbia, west to Columbia River Valley near Rossland (Green Mountain\*, 6,300 feet), and on eastern slopes of Rocky Mountains in western Alberta from Mount Forgetmenot\* north through Banff and Jasper National Parks\* at least to Smoky River. (Alta., B.C.)

\***Synaptomys borealis dalli** Merriam. DALL'S LEMMING MOUSE. *Campagnol lemming de Dall*.

1896. *Synaptomys (Mictomys) dalli* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 62 (March 19, 1896).

1903. *Synaptomys (Mictomys) andersoni* Allen, Bull. Amer. Mus. Nat. Hist., 19:554. Type from Level Mountain, northern British Columbia.

1927. *Synaptomys borealis dalli*, Howell, A. B., North Amer. Fauna, No. 50, 24 (June 30, 1927).

*Type Locality.* Nulato, Alaska. (Type: U.S.N.M., No. 49373.)

*Range.* Hudsonian zone in central and southern Alaska, southwestern Yukon, and northwestern British Columbia to the eastward of the coast district, southward as far as head of Bella Coola River. The N.M.C. obtained 22 specimens in 1938 from Caribou Mountain\* near Stuie, British Columbia, at elevations 4,500, 6,500, and 7,500 feet; and 2 specimens (Burwash Landing\* near Kluane Lake, and Squanga Lake\*, southwestern Yukon) in 1943, and 26 specimens from Canol Road (Lapie River\*, Sheldon Lake, Mile 222\*, and south fork Macmillan River, Mile 249\*) in southeastern Yukon in 1944. (B.C., Y.T.)

‡\***Synaptomys borealis innuitus** (True). UNGAVA LEMMING MOUSE. *Campagnol lemming d'Ungava*.

1894. *Mictomys innuitus* True, Diagnoses of New North American Mammals, p. 3 (April 26, 1894). (Reprint: Proc. U.S. Nat. Mus., vol. 17, p. 243 (Nov. 15, 1894).)

1896. *Synaptomys (Mictomys) innuitus* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 61 (March 19, 1896).

1927. *Synaptomys borealis innuitus* Howell, A. B., North Amer. Fauna, No. 50, p. 24 (June 30, 1927).

*Type Locality.* Fort Chimo, Ungava, Canada. (Type: U.S.N.M., No. 14838/24729.)

*Range.* Interior of northern Quebec, from Chimo\* south to upper part of Ste. Marguerite River about 100 miles north of the Gulf of St. Lawrence. (P.Q.)



**Synaptomys borealis medioximus** Bangs. LABRADOR LEMMING MOUSE. *Campagnol lemming du Labrador.*

1900. *Synaptomys (Mictomys) innuitus medioximus* Bangs, Proc. New England Zool. Club, vol. 2, p. 40 (Sept. 20, 1900).

1927. *Synaptomys borealis medioximus* Howell, A. B., North Amer. Fauna, No. 50, p. 29 (June 30, 1927).

*Type Locality.* L'Anse au Loup, Strait of Belle Isle, Labrador, Canada. (Type: M.C.Z., E. A. and O. Bangs coll., No. 8852.)

*Range.* Known only from the coast district of Labrador from Strait of Belle Isle north to Hamilton Inlet and Nain. (Labr.)

†\***Synaptomys borealis smithii** Anderson and Rand.<sup>1</sup> MANITOBA LEMMING MOUSE. *Campagnol lemming du Manitoba.*

1943. *Synaptomys borealis smithii* Anderson and Rand, Can. Field-Nat., vol. 57, No. 6, pp. 101-2 (Dec. 10, 1943).

*Type Locality.* Thicket Portage, Mile 165, Hudson Bay Railway, Manitoba. (Type: N.M.C., No. 14815.)

*Range.* From Ilford\* (Mile 286, Hudson Bay Railway) south to Riding Mountain National Park, Sandilands Forest Reserve, and other points in south-eastern Manitoba; west to Prince Albert National Park, Saskatchewan. Specimens from extreme western and northwestern Ontario are probably referable to this form. (Man., Sask.)

\***Synaptomys borealis sphagnicola** Preble. PREBLE'S LEMMING MOUSE. *Campagnol lemming de Preble.*

1899. *Synaptomys (Mictomys) sphagnicola* Preble, Proc. Biol. Soc. Wash., vol. 13, p. 43 (May 29, 1899).

1927. *Synaptomys borealis sphagnicola* A. B. Howell, North Amer. Fauna, No. 50, p. 30 (June 30, 1927).

*Type Locality.* Fabyans, Coos county, New Hampshire. (Type: U.S.N.M., No. 96543.)

*Range.* Only 9 specimens of this rare subspecies have been taken: northern New Hampshire (White Mountains, type specimen); Maine (Mount Katahdin, 2); New Brunswick (Miramichi Road\*, 15 miles from Bathurst, 1); Quebec (Ste. Rose, Temiscouata county, 4, and Tabletop Mountain\*, 3,800 feet altitude, Gaspé county, 1). (N.B., P.Q.)

\***Synaptomys borealis wrangeli** Merriam. WRANGELL LEMMING MOUSE. *Campagnol lemming de Wrangell.*

1896. *Synaptomys (Mictomys) wrangeli* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 63 (March 19, 1896).

1896. *Synaptomys (Mictomys) truei* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 62 (March 16, 1896). Type from Skagit Valley, Skagit county, Wash.

*Type Locality.* Wrangell, Alaska. (Type: U.S.N.M., No. 74720.)

*Range.* Coastal strip in the Canadian zone from the Alexander Archipelago, Alaska (1927, p. 27), southward (Metlakatla\*) to the extreme northwestern corner of Washington (Mount Baker, Skagit Valley, and Mount Whistler\*). (B.C.)

<sup>1</sup> Named in honour of FO Ronald Ward Smith, R.C.A.F. (1913-44), killed in action Sept. 11, 1944, who collected the type and many other specimens for the N.M.C. along the Hudson Bay Ry.



Genus *Lemmus* Link. Lemmings<sup>1</sup>

1795. *Lemmus* Link, Beyträge zur Naturgesch., vol. 1, pt. 2, p. 75. Type, *Mus lemmus* Linnaeus.

\**Lemmus trimucronatus trimucronatus* (Richardson). BROWN LEMMING. BACK'S LEMMING. *Lemming brun de Back*.

1825. *Arvicola trimucronata* Richardson, Journ. Parry's Second Voyage, app., p. 309.

1900. *Lemmus trimucronatus* Stone, Proc. Acad. Nat. Sci. Phila., p. 35 (March 24, 1900).

Type Locality. Point Lake, Mackenzie district, Northwest Territories, Canada.

Range. Boreal America, in the east from Hudson Strait north to northern Baffin Island (Admiralty Inlet\*, Pond Inlet\*, Strathcona Sound\*); and southern part of Somerset Island near Fort Ross, Bellot Strait\*; west of Hudson Bay north of about 60th parallel, to near eastern end of Great Slave Lake, Clinton Colden Lake\*, west and north to Cape Bathurst\* and west coast of Banks Island (Cape Kellett\*). (N.W.T.)

‡\**Lemmus trimucronatus alascensis* Merriam. ALASKA BROWN LEMMING. *Lemming brun d'Alaska*.

1885. *Myodes obensis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885). (Part.)

1900. *Lemmus alascensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 26 (March 14, 1900).

1900. *Lemmus yukonensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 27 (March 14, 1900). Type from Charlie Creek, Yukon River, Alaska.

1937. *Lemmus trimucronatus alascensis* Anderson, Mammals and Birds of the Western Arctic District, N.W.T., Canada, in Canada's Western Northland, Dept. Mines and Resources, Ottawa, p. 110 (July 9, 1937). (Including *yukonensis*.)

Type Locality. Point Barrow, Alaska. (Type: U.S.N.M., No. 186499.)

Range. Alaska, north of latitude 62 degrees, and northwestern Arctic Canada, including northern part of Yukon and northwestern part of Mackenzie district (Tuktuyaktok\*, Mackenzie delta), Northwest Territories, east to Cape Bathurst\*; intergrading with *L. t. trimucronatus* in Mackenzie district area and with *L. t. helvolus* in southern Yukon. (N.W.T., Y.T.)

\**Lemmus trimucronatus helvolus* (Richardson). TAWNY LEMMING. *Lemming jaunâtre*.

1828. *Arvicola (Lemmus) helvolus* Richardson, Zool. Journ., vol. 3, p. 517.

1908. *Lemmus helvolus* Preble, North Amer. Fauna, No. 27, p. 182 (Oct. 26, 1908).

1944. *Lemmus trimucronatus helvolus* Davis, W. B.; The Murrelet, vol. 25, No. 2 (May-August, 1944), p. 22 (Sept. 19, 1944).

Type Locality. Near the headwaters of one of the southern tributaries of Peace River, or between there and the Jasper House region, Alberta, Canada (Preble, 1908, p. 182).

Range. Rocky Mountains region of northwestern Alberta and in British Columbia from headwaters of Peace River, Babine Mountains, Omineca Mountains, Stikine Mountains, and Coast Mountains as far south as Stuie\* at head of Bella Coola River, and Rainbow Mountains\* (about 52° 30' N.), and north to southern Yukon (Tantalus\* and Teslin Lake\*). (Alta., B.C., Y.T.)

Genus *Dicrostonyx* Gloger.<sup>2</sup> Varying Lemmings

1841. *Dicrostonyx* Gloger, Gemeinn. Hand- u. Hilfsbuch d. Naturgesch., p. 97. Type, an American species, probably *Mus hudsonius* Pallas.

1855. *Misothermus* Hensel, Zeitschr. Deutsch. geolog. Gesellsch., vol. 7, p. 492. Type, *Mus torquatus* Pallas.

\**Dicrostonyx hudsonius* (Pallas). LABRADOR VARYING LEMMING. *Lemming varié du Labrador*.

1778. *Mus hudsonius* Pallas, Nov. Sp. Quadr. Glir. Ord., p. 208.

1897. *Dicrostonyx hudsonius* Bangs, Proc. Biol. Soc. Wash., vol. 11, p. 237 (Sept. 17, 1897).

Type Locality. Labrador, Canada. (Type not known.)

<sup>1</sup>Revised by Davis, W. B., Geographic Variation in Brown Lemmings (Genus *Lemmus*), The Murrelet, vol. 25, No. 2 (May-August, 1944), pp. 19-25 (Sept. 19, 1944).

<sup>2</sup>Revised by Allen, G. M., The American Collared Lemmings (*Dicrostonyx*), Bull. Mus. Comp. Zool., vol. 62, pp. 509-542 (Feb. 1919); and by Anderson, R. M., and Rand, A. L., The Varying Lemmings (*Dicrostonyx*) in Canada, Jour. Mamm. vol. 26, No. 3, pp. 301-306 (Nov. 14, 1945).



*Range.* The barren-ground area of Ungava Peninsula and Labrador; south side of Hudson Strait, and along the Atlantic coast at least as far south as Hamilton Inlet and possibly to Strait of Belle Isle, and on the east side of Hudson Bay to about Great Whale River (55° N.); also on many of the islands along east side of Hudson Bay from Digges Islands to the Belcher Islands. (P.Q., Labr.)

**\**Dicrostonyx groenlandicus groenlandicus* (Traill).** GREENLAND VARYING LEMMING.  
*Lemming varié du Groenland.*

1823. *Mus groenlandicus* Traill, Scoresby's Journ. Voy. northern Whale-Fishery, p. 416.  
1911. *Dicrostonyx hudsonius groenlandicus* Jacobi, Abhandl. u. Berichte k. Zool. u. Anthrop.-Ethnol. Mus. Dresden, vol. 13, 1908, No. 4, p. 9 (1911).  
1911. *Dicrostonyx groenlandicus* G. M. Allen, Bull. Mus. Comp. Zool., vol. 62, p. 533 (Feb. 1919).

*Type Locality.* Jameson's Land, Greenland. (Type: According to Robt. Brown (Proc. Zool. Soc. London, pp. 330-362, 1868) the type specimen was in the Edinburgh Mus. of Sci. and Art in 1868.)

*Range.* Found from about latitude 69° N. on the east coast of Greenland northward to the limit of land, 83° 24', and thence westward along the coast of North Greenland to the Kane Basin, and across Robeson Channel, Ellesmere Island, and Axel Heiberg Island, south through Baffin Island\*, to Melville Peninsula\*, Southampton Island\*, and Baker Lake\*, Keewatin district, intergrading with *richardsonii* in the southern part of the area. (N.W.T., in Franklin and Keewatin districts; Greenland.)

**†\**Dicrostonyx groenlandicus kilangmiutak* Anderson and Rand.** MACKENZIE VARYING LEMMING. *Lemming varié du Mackenzie.*

1945. *Dicrostonyx groenlandicus kilangmiutak* Anderson and Rand, Journ. Mamm., vol. 26, No. 3, p. 305 (Nov. 14, 1945).

*Type Locality.* DeHaven Point, southeastern point of Victoria Island, west side of Victoria Strait, district of Franklin, Northwest Territories, Canada; latitude about 69° N., longitude about 101° 30' W.; coll. by Joseph F. Bernard. (Type: N.M.C., No. 3993.)

*Range.* The Arctic coast mainland at least from the mouth of Mackenzie River\* to Coronation Gulf\*, and south to Aylmer Lake\*, in the district of Mackenzie; and Banks\*, Borden\*, Melville\*, Taylor\*, and Victoria\* islands in district of Franklin, Northwest Territories, Canada. (N.W.T., Franklin and Mackenzie districts.)

**\**Dicrostonyx groenlandicus richardsoni* (Merriam).** RICHARDSON'S VARYING LEMMING.  
*Lemming varié de Richardson.*

1900. *Dicrostonyx richardsoni* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 26 (March 14, 1900).  
1919. *Dicrostonyx rubricatus richardsoni* G. M. Allen, Bull. Mus. Comp. Zool., vol. 62, p. 525 (Feb. 1919).  
1935. *Dicrostonyx groenlandicus richardsoni* Degerbøl, Rept. Fifth Thule Exped., Mammals, 2:4-5, pp. 9-16.

*Type Locality.* Churchill, west shore of Hudson Bay, Manitoba, Canada. (Type: U.S.N.M., No. 186501.)

*Range.* The barren grounds west of Hudson Bay from Churchill\*, north-eastern Manitoba, at least as far north as Tavani Bay; west to Artillery Lake\*, intergrading with *groenlandicus* northwest of Hudson Bay and with *kilangmiutak* farther west. (Man., N.W.T., in Keewatin and Mackenzie districts.)



**\*Dicrostonyx groenlandicus rubricatus** (Richardson). ALASKA VARYING LEMMING.  
*Lemming varié d'Alaska.*

1839. *Arvicola rubricatus* Richardson, Zool. Beechey's voyage, p. 7.  
1885. *Cuniculus torquatus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885). (In part.)  
1900. *Dicrostonyx nelsoni* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 25 (March 14, 1900).  
St. Michael, Norton Sound, Alaska.  
1900. *Dicrostonyx hudsonius alascensis* Stone, Proc. Acad. Nat. Sci. Phila., p. 37 (March 24, 1900). Point Barrow, Alaska.  
1919. *Dicrostonyx rubricatus* G. M. Allen, Bull. Mus. Comp. Zool., vol. 62, p. 518 (Feb. 1919).  
1937. *Dicrostonyx groenlandicus rubricatus* Anderson, Mammals and Birds of the Western Arctic District, in Canada's Western Northland, Dept. of Mines and Resources, Ottawa, p. 110 (July 9, 1937).

*Type Locality.* American side of Bering Strait, Alaska. (Type not specified.)

*Range.* Tundra or unforested regions of northwestern and northern coast of Alaska, from mouth of Kuskoquim River around to Arctic coast of Yukon (Herschel Island\*) to western border of Mackenzie River delta in extreme northwest corner of Mackenzie district, Northwest Territories. (N.W.T., Y.T.)

*microti* group

†Genus *Phenacomys* Merriam.<sup>1</sup> Voles

1889. *Phenacomys* Merriam, North Amer. Fauna, No. 2, p. 28 (Oct. 30, 1889). Type, *Phenacomys intermedius* Merriam. Genotype in National Museum of Canada, Register of Mammals, No. 780; collected by Dr. George M. Dawson of Geol. and Nat. Hist. Surv. of Canada, Oct. 2, 1888.  
1915. *Arborimus* Taylor, Proc. Calif. Acad. Sci., ser. 4, vol. 5, p. 119 (Dec. 30, 1915). Type, *Phenacomys longicaudus* True.

†**\*Phenacomys intermedius intermedius** Merriam. MERRIAM'S PHENACOMYS. KAMLOOPS PHENACOMYS. *Phenacomys de Merriam.*

1889. *Phenacomys intermedius* Merriam, North Amer. Fauna, No. 2, p. 32 (Oct. 30, 1889).  
1894. *Phenacomys truei* Allen, Bull. Amer. Mus. Nat. Hist., vol. 66, p. 331 (Nov. 7, 1894). Black Hills (Laramie Mountains), Wyoming.  
1897. *Phenacomys preblei* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 45 (March 16, 1897). Longs Peak, Colorado, altitude about 9,000 feet.  
1899. *Phenacomys constablei* Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 4 (March 16, 1899). Telegraph Creek, British Columbia.  
1924. *Phenacomys intermedius intermedius* Miller, List North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 399.

*Type Locality.* Basaltic plateau about 20 miles north-northwest of Kamloops, British Columbia, Canada. Altitude, 5,500 feet. (Type: N.M.C., No. 780.)

*Range.* British Columbia from west slope of Rocky Mountains to east slope of the Cascade and Coast Ranges; also northeastern Washington, Idaho, eastern and southern Oregon, and northern California; thence in the mountains through southern Montana, Wyoming, Colorado, and into northern New Mexico. (B.C.)

†**\*Phenacomys intermedius laingi** Anderson. NORTHWEST COAST PHENACOMYS. *Phenacomys de la côte nord-ouest.*

1942. *Phenacomys intermedius laingi* Anderson, Can. Field-Nat., vol. 56, No. 4 (June 8, 1942).

*Type Locality.* Kimsquit River, Cornice Creek, near head of Dean Inlet, latitude about 52° 24' N., longitude about 127° W., altitude 2,500 feet. (Type: N.M.C., No. 16528.)

*Range.* Coast Range of British Columbia at heads of Dean Inlet\* (Kimsquit River 2,500 feet) and Bella Coola Inlet (Atnarko River\* 4,700 feet, and Rainbow Mountains\* 5,000 to 5,500 feet, near southern boundary of Tweedsmuir Provincial Park). (B.C.)

<sup>1</sup>Revised by A. B. Howell, North Amer. Fauna No. 48, p. 66, 1926. "Voles of the Genus *Phenacomys*, I." Revision of the Genus *Phenacomys*, II. Life History of the Red Tree Mouse (*Phenacomys longicaudus*), pp. 1-66. See also Canadian Voles of the Genus *Phenacomys* with description of 2 new Canadian subspecies, by R. M. Anderson, Can. Field-Nat., vol. 56, No. 4, pp. 56-61, Pl. 1 (June 8, 1942).



**\*Phenacomys intermedius levis** A. B. Howell. WESTERN ALBERTA PHENACOMYS. *Phenacomys d'Alberta ouest*.

1923. *Phenacomys intermedius levis*, A. B. Howell, Proc. Biol. Soc. Wash., vol. 36, p. 157 (May 1, 1923).

*Type Locality.* Saint Mary's Lake, Teton county, Montana. (Type: U.S.N.M., No. 72405.)

*Range.* Eastern slope of Rocky Mountains from Jasper National Park\*, Alberta, and Moose River, British Columbia, south to Teton county, Montana. (Alta., B.C.)

**‡\*Phenacomys intermedius oramontis** Rhoads. MOUNT BAKER PHENACOMYS. *Phenacomys des montagnes Cascades*.

1895. *Phenacomys oramontis* Rhoads, American Naturalist, vol. 29, p. 941 (Oct. 1895).

1899. *Phenacomys olympicus* Elliot, Field Columb. Mus., publ. 30, zool. ser., vol. 1, p. 225 (Feb. 1, 1899). Happy Lake, Olympic Mountains, Clallam county, Wash. Altitude, 5,000 feet.

1924. *Phenacomys orophilus* Miller, North Amer. Recent Mammals, p. 399 (March 18, 1924). Near head of Timber Creek, Lemhi Mountains, Lemhi county, Idaho.

1926. *Phenacomys intermedius intermedius* A. B. Howell, North Amer. Fauna, No. 48, p. 15 (Oct. 12, 1926). Kamloops, British Columbia, Canada. Altitude, 5,500 feet. (In part.)

1942. *Phenacomys intermedius oramontis* Anderson, Can. Field-Nat., vol. 56, No. 5, p. 59 (June 8, 1942).

*Type Locality.* Church Mountain (Lihumitson Mountain), Lihumitson Park, Mount Baker Range, New Westminster district, British Columbia. Altitude 6,000 feet. (Type: Acad. Nat. Sci. Phila., No. 9354; formerly No. 2354, S. N. Rhoads coll.)

*Range.* West slope of Cascades and Coast Ranges above 4,500 feet in southwestern British Columbia, in the Hudsonian zone of the Olympic and Cascade Mountains of Washington, and as far south as central Oregon. (Five topotypes in N.M.C. coll.) (B.C.)

**\*Phenacomys ungava ungava** Merriam. UNGAVA PHENACOMYS. *Phenacomys d'Ungava*.

1899. *Phenacomys celatus* Merriam, North Amer. Fauna, No. 2, p. 33 (Oct. 30, 1889). (Godbout, Saguenay county, Quebec, Canada. Type: U.S.N.M., No. 186486.)

1899. *Phenacomys latimanus* Merriam, ibid., p. 34 (Oct. 30, 1889). (Fort Chimo, Ungava, Quebec. Type: U.S.N.M., No. 186487. Immature male.)

1899. *Phenacomys ungava* Merriam, ibid., p. 35 (Oct. 30, 1889). (Name selected by Miller, Proc. Biol. Soc. Wash., vol. 11, p. 84 (April 21, 1897).)

1912. *Phenacomys ungava ungava* Miller, List North Amer. Mamm., 1911, U.S.N.M., Bull. 79, p. 209 (Dec. 31, 1912).

*Type Locality.* Fort Chimo, Ungava, Quebec, Canada. (Type: U.S.N.M., No. 186488; No. 5468/6155, Merriam coll.)

*Range.* The most eastern records are from Chimo near Hudson Strait, and Godbout, Saguenay county, on north shore of Gulf of St. Lawrence, both in Quebec; specimens from various points in northern Ontario (Abitibi, Manitoulin, and Nipissing districts, and various points north of Lake Superior) west to Favourable Lake in Kenora district near the Manitoba boundary. (Ont., P.Q.)

**Phenacomys ungava crassus** (Bangs). LABRADOR PHENACOMYS. *Phenacomys du Labrador*.

1900. *Phenacomys celatus crassus* Bangs, Proc. New England Zool. Club, vol. 2, p. 39 (Sept. 20, 1900).

1912. *Phenacomys ungava crassus* Miller, North Amer. Land Mamm. 1911, p. 209 (Dec. 31, 1912).

*Type Locality.* Rigolet, Hamilton Inlet, Canada. (Type: M.C.Z., No. 3959, E. A. and O. Bangs coll.)

*Range.* Atlantic coast of Labrador from Strait of Belle Isle north to Hamilton Inlet. (Labr.)



**\*Phenacomys ungava mackenzii** Preble. MACKENZIE PHENACOMYS. *Phenacomys du Mackenzie*.

1902. *Phenacomys mackenzii* Preble, Proc. Biol. Soc. Wash., vol. 15, p. 182 (Aug. 6, 1902).  
 1942. *Phenacomys ungava mackenzii* Anderson, Can. Field-Nat., vol. 56, No. 4, April 1942, p. 5 (June 8, 1942).

*Type Locality.* Fort Smith, Slave River, Mackenzie district, latitude 60 degrees north, Northwest Territories, Canada. (Type: U.S.N.M., No. 110625.)

*Range.* North nearly to Great Bear Lake in Northwest Territories (Lake St. Croix, 120 miles slightly west of north of Fort Rae) and southeastern Yukon (Canol Road, one from Lapie Lakes\* and two from Lapie River, Mile 132\*, in 1944—Rand, 1945, p. 41); west to eastern foothills of Rocky Mountains in western Alberta (Bearberry Creek\* west of Olds), and northeastern British Columbia (Peace River); south to Red Deer River in central Alberta and Athabaska Lake in northwestern Saskatchewan; and east to Churchill\*, Manitoba. (Alta., B.C., Man., N.W.T., Sask., Y.T.)

**†\*Phenacomys ungava soperi** Anderson. PRAIRIE PHENACOMYS. *Phenacomys des Prairies*.

1942. *Phenacomys ungava soperi* Anderson, Can. Field-Nat., vol. 56, No. 4, pp. 56-60, Pl. 1, April 1942. (June 8, 1942.)

*Type Locality.* Near Swanson Creek, in middle of sec. 34, tp. 19, rge. 17, Riding Mountain National Park, about 10 miles east of Park Headquarters at Wasagaming, on Clear Lake, altitude 2,016 feet; the wooded island plateau of Riding Mountain being about 1,100 feet above the general level of the surrounding prairies. (Type: N.M.C., No. 17131.)

*Range.* From southwestern Manitoba\* and south-central Saskatchewan, west to south-central Alberta; in forested areas on edge of northern Great Plains region. (Alta., Man., Sask.)

### Genus *Clethrionomys* Tilesius. Red-backed Mice

1850. *Clethrionomys* Tilesius, Glirium species in Bavaria nonnullae, Isis, No. 2, Encyclopaedische Zeitschrift vorzüglich für Naturgeschichte, Physiologie, etc., Müchener Verein für Naturkunde, pp. 27-29. Palmer, T. S., Proc. Biol. Soc. Wash., vol. 41, 1928, p. 87 (March 26, 1928), shows that *Clethrionomys* Tilesius antedates *Evotomys* Coues by 24 years. Type, *Mus rutilus* Pallas.  
 1874. *Evotomys* Coues, Proc. Acad. Nat. Sci. Phila., p. 186 (Dec. 15, 1874). Type, *Mus rutilus* Pallas.<sup>1</sup>

**\*Clethrionomys gapperi gapperi** (Vigors). GAPPER'S RED-BACKED MOUSE. *Campagnol à dos roux de Gapper*.

1830. *Arvicola gapperi* Vigors, Zool. Journ., vol. 5, p. 204.  
 1885. *Evotomys rutilus gapperi* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885). (Part.)  
 1891. *E[votomys] gapperi* Merriam, North Amer. Fauna, No. 5, p. 119 (July 30, 1891).  
 1894. *Evotomys fuscodorsalis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 6, p. 103 (April 14, 1894). Trousters Lake, New Brunswick, Canada. Based on a dark brown colour phase that is found in most of the known races of the species.

*Type Locality.* Between York [Toronto] and Lake Simcoe, Ontario, Canada. (Type specimen not known.)

*Range.* From Massachusetts, New Jersey, and Pennsylvania northward to southwestern Quebec, central, southern, and southwestern Ontario; intergrading with *C. g. hudsonius* in western Quebec and northern Ontario. (Ont., P.Q.)

<sup>1</sup>Revised by Bailey, V., Revision of the American Voles of the Genus *Evotomys*, Proc. Biol. Soc. Wash., vol. 11, 1897, pp. 113-138, Pl. 1 (May 13, 1897).



‡\***Clethrionomys gapperi athabascae** (Preble). ATHABASKA RED-BACKED MOUSE. *Campagnol à dos roux d'Athabaska*.

1908. *Evotomys gapperi athabascae* Preble, North Amer. Fauna, No. 27, p. 178 (Oct. 26, 1908).

*Type Locality.* Fort Smith, Slave River, Mackenzie district, Northwest Territories, Canada. (Type: U.S.N.M., No. 109945.)

*Range.* Southern part of Mackenzie district, north to Great Slave Lake, west to Liard River\* in northern British Columbia, south through Peace River Valley in northeastern British Columbia\* and northern Alberta\*; south at least to Jasper National Park\*, and through northern Saskatchewan to northwestern Manitoba. (Alta., B.C., Man., N.W.T., Sask.)

\***Clethrionomys gapperi caurinus** (Bailey). NORTHWESTERN RED-BACKED MOUSE. *Campagnol à dos roux du Nord-ouest*.

1898. *Evotomys caurinus* Bailey, Proc. Biol. Soc. Wash., vol. 12, p. 21 (Jan. 27, 1898).

1928. *Evotomys*=*Clethrionomys*, T. S. Palmer, Proc. Biol. Soc. Wash., vol. 41, p. 87 (March 16, 1928).

1935. *Clethrionomys gapperi caurinus* Racey and Cowan, Rept. B.C. Prov. Mus., 1935, pp. H25-26.

*Type Locality.* Lund, east shore of Malaspina Inlet, British Columbia, Canada. (Type: U.S.N.M., No. 89460.)

*Range.* Coast region of southwestern British Columbia from near the Washington boundary (Chilliwack Valley\*, Cultus Lake\*, Lihumitson Park\*, Skagit\*), Vancouver, Malaspina Inlet, Horseshoe Lake\*, Stillwater\*, and north to Loughborough Inlet\*, Kingcome Inlet\*, Rivers Inlet\*, and Bella Coola region (Hagensborg\*, Stuie\*, Caribou Mountains\*, Rainbow Mountains\*), and Kimsquit\* at head of Dean Inlet. (B.C.)

\***Clethrionomys gapperi galei** (Merriam). GALE'S RED-BACKED MOUSE. *Campagnol à dos roux de Gale*.

1890. *Evotomys galei* Merriam, North Amer. Fauna, No. 4, p. 23 (Oct. 8, 1890).

1897. *Evotomys gapperi galei* Bailey, Proc. Biol. Soc. Wash., vol. 11, p. 126 (May 13, 1897).

*Type Locality.* Ward, Boulder county, Colorado. Altitude, 9,500 feet. (Type: U.S.N.M., No. 186491.)

*Range.* Boreal zone of mountains of Colorado and northward along eastern ranges of Rocky Mountains to northern Montana, and extreme southwestern Alberta\*. (Alta.)

†\***Clethrionomys gapperi gaspeanus** Anderson. GASPE RED-BACKED MOUSE. *Campagnol à dos roux de Gaspé*.

1943. *Clethrionomys gapperi gaspeanus* Anderson, Ann. Rept. 1942, Provancher Soc. Nat. Hist. Canada, Quebec, pp. 57-59 (English), pp. 72-74 (French) (Sept. 7, 1943).

*Type Locality.* Berry Mountain Camp, altitude 1,500 feet, near junction of Berry Mountain Brook with Grand Casapedia River, Matane county, Quebec, Canada. (Type: N.M.C., No. 4953.)

*Range.* Gaspé Peninsula\*, Quebec, and northwestern New Brunswick (Madawaska county\*). (N.B., P.Q.)

†\***Clethrionomys gapperi hudsonius** Anderson. HUDSONIAN RED-BACKED MOUSE. *Campagnol à dos roux d'Hudson*.

1940. *Clethrionomys gapperi hudsonius* Anderson, Rapport Annuel 1939, Société Provancher d'Histoire Naturelle du Canada, Québec, pp. 73-75 (Feb. 29, 1940).

*Type Locality.* Kapuskasing, on Kapuskasing River, about 64 miles west of Cochrane, Ontario, Canada. (Type: N.M.C., No. 3557.)

*Range.* From Churchill, and northern part of Hudson Bay Railway north-west to Sandhill Lake (59° 21' N., 98° 43' W.)\* and as far south as Ilford\*,



Manitoba, southeastward in the region south of Hudson Bay and west of James Bay to Kapuskasing\* and Lake Abitibi on the Transcontinental line of the Canadian National Railways in Ontario; south and east sides of James Bay\* and north on east side of Hudson Bay as far as Richmond Gulf, Quebec. (Man., Ont., P.Q.)

**\*Clethrionomys gapperi loringi** (Bailey). PLAINS RED-BACKED MOUSE. *Campagnol à dos roux de Loring*.

1897. *Evotomys gapperi loringi* Bailey, Proc. Biol. Soc. Wash., vol. 11, p. 125 (May 13, 1897).

*Type Locality*. Portland, Traill county, North Dakota. (Type: U.S.N.M., No. 75795.)

*Range*. Timbered valleys along edge of plains in Minnesota and eastern North and South Dakota, and in Canada from southwestern Manitoba\* to the foothills of Rocky Mountains in Alberta\*; intergrading with *C. g. borealis* in northern parts of Great Plains region. (Alta., Man., Sask.)

**\*Clethrionomys gapperi ochraceus** (Miller). OCHRACEOUS RED-BACKED MOUSE. *Campagnol jaunâtre à dos roux*.

1894. *Evotomys gapperi ochraceus* Miller, Proc. Boston Soc. Nat. Hist., vol. 26, p. 193 (March 24, 1894).

*Type Locality*. Mount Washington, Coos county, New Hampshire. Altitude, 5,500 feet. (Type: coll. of Gerrit S. Miller, Jr., No. 2533.)

*Range*. The Green Mountains of northern Vermont, White Mountains of New Hampshire, northern Maine, central and southern New Brunswick\*, and parts of extreme southern Quebec south of the St. Lawrence River\*. (N.B., P.Q.)

**\*Clethrionomys gapperi proteus** (Bangs). LABRADOR RED-BACKED MOUSE. *Campagnol à dos roux du Labrador*.

1897. *Evotomys proteus* Bangs, Proc. Biol. Soc. Wash., vol. 11, p. 137 (May 13, 1897).

1927. *Evotomys gapperi proteus* Allen, Journ. of Mamm., vol. 8, p. 248.

*Type Locality*. Hamilton Inlet, Labrador, Canada.

*Range*. Atlantic coast of Labrador (Hamilton Inlet, Davis Inlet, and north at least to Assiwaban River\*), and along the north shore of the Gulf of St. Lawrence westward to Bay of Seven Islands. (P.Q., Labr.)

**\*Clethrionomys gapperi rufescens** R. W. Smith. NOVA SCOTIA RED-BACKED MOUSE. *Campagnol à dos roux de la Nouvelle-Ecosse*.

1940. *Clethrionomys gapperi rufescens* R. W. Smith, The American Midland Naturalist, Notre Dame, Indiana, vol. 24, No. 1, pp. 233-234 (July 1940).

*Type Locality*. Wolfville, Kings county, Nova Scotia. (Type: M.V.Z., No. 86721.)

*Range*. "Nova Scotia" (R. W. Smith).

(Mr. Smith states (op. cit., p. 234) that "Several specimens from New Brunswick indicate intergradation with *rufescens* in their pelage coloration. Specimens from eastern Quebec, Maine, and Vermont appear to be typical *ochraceus*." (N.S.)

**\*Clethrionomys gapperi saturatus** (Rhoads). KOOTENAY RED-BACKED MOUSE. *Campagnol à dos roux de la Kootenay*.

1894. *Evotomys gapperi saturatus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 284 (Oct. 23, 1894).

*Type Locality*. Nelson, British Columbia, Canada, on Kootenay River, 30 miles north of the northern boundary of Washington. (Type No. 483, ad., ♀, coll. of S. N. Rhoads.)

*Range*. The Blue Mountains of Oregon, mountains of northern Idaho, and northward into British Columbia to Cariboo Lake (near Kamloops), and most parts of southern British Columbia from the east slope of the Cascades\* to the Rocky Mountains\*. (B.C.)



\**Clethrionomys gapperi ungava* (Bailey). UNGAVA RED-BACKED MOUSE. *Campagnol à dos roux d'Ungava*.

1897. *Evotomys ungava* Bailey, Proc. Biol. Soc. Wash., vol. 11, p. 130 (May 13, 1897).

1939. *Clethrionomys gapperi ungava* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, for 1938, p. 83 (Feb. 28, 1939).

*Type Locality*. Fort Chimo, Ungava district, Quebec, Canada. (Type: U.S.N.M., No. 186492.)

*Range*. Northern parts of Ungava Peninsula, Quebec; probably meeting and intergrading with *C. g. proteus* on the southeast and with *hudsonius* on the southwest. (P.Q.)

†\**Clethrionomys dawsoni dawsoni* (Merriam).<sup>1</sup> DAWSON RED-BACKED MOUSE. *Campagnol à dos roux de Dawson*.

1888. *Evotomys dawsoni* Merriam, Amer. Nat., vol. 22, p. 650 (July 1888).

1898. *Evotomys alascensis* Miller, Proc. Acad. Nat. Sci. Phila., p. 364 (Oct. 15, 1898). (St. Michael, Norton Sound, Alaska.) See Osgood, North Amer. Fauna, No. 24, p. 34 (Nov. 23, 1904). (Type: U.S.N.M., No. 14359/22226.)

1937. *Clethrionomys dawsoni dawsoni* Anderson in Canada's Western Northland, Ottawa, p. 112 (July 9, 1937).

*Type Locality*. Finlayson River, a northern source of the Liard River, latitude 61° 30' N., longitude 129° 30' W., Yukon, Canada. Altitude, 3,000 feet. (Type: N.M.C., No. 92.)

*Range*. From Thelon Game Sanctuary\* along north shore of Great Slave Lake, including adjacent islands, and upper Mackenzie River, Liard River\*, northwest British Columbia (Alaska Highway\*), southeastern Yukon (Canol Road\*); west to Juneau and Yakutat, and north along the coast to Norton Sound and nearly to Bering Strait (Teller\*), Alaska. (B.C., N.W.T., Y.T.)

*Clethrionomys wrangeli* (Bailey). WRANGELL RED-BACKED MOUSE. *Campagnol à dos roux de Wrangell*.

1897. *Evotomys wrangeli* Bailey, Proc. Biol. Soc. Wash., vol. 11, p. 120 (May 13, 1897).

*Type Locality*. Wrangell, Alaska. (Type: U.S.N.M., No. 74724.)

*Range*. Known only from Wrangell and Revillagigedo Islands, southern Alaska. (Miller, 1924, p. 401.) Swarth (1922, pp. 173-174) records 3 specimens from Flood Glacier and 23 from Great Glacier, Stikine River, British Columbia; suggesting that *wrangeli* seems to be a coastal offshoot of *dawsoni*, although there was no indication of intergradation at those points with the nearly adjacent *dawsoni*. (B.C.)

#### Genus *Microtus*<sup>2</sup> Schrank. Meadow Mice

1798. *Microtus* Schrank, Fauna Boica, vol. 1, Abth. 1, p. 72. Type, *Microtus terrestris* Schrank=*Mus arvalis* Pallas.

#### Subgenus *Microtus* Schrank

1894. *Tetramerodon* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 282 (Oct. 23, 1894). Type, *Arvicola tetramerus* Rhoads.

#### *pennsylvanicus* group<sup>3</sup>

‡\**Microtus pennsylvanicus pennsylvanicus* (Ord). PENNSYLVANIA MEADOW MOUSE. *Campagnol des champs*.

1815. *Mus pennsylvanica* Ord, Guthrie's Geography, 2d Amer. ed., vol. 2, p. 292.

1885. *Arvicola riparius riparius* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 597 (1885). (Part.)

1895. *M[icrotus] pennsylvanicus* Rhoads, Amer. Nat., vol. 29, p. 940 (Oct. 1895).

*Type Locality*. Meadows below Philadelphia, Pennsylvania.

<sup>1</sup>Type collected by and named in honour of Dr. George Mercer Dawson (1849-1901), Director of the Geological Survey of Canada, who collected many zoological specimens for the National Museum of Canada, and was also one of the greatest earlier Canadian anthropologists.

<sup>2</sup>Revised by V. Bailey, Revision of American Voles of the Genus *Microtus*, North Amer. Fauna, No. 17, pp. 88, Pls. 5, fig. 17 (June 6, 1900).

<sup>3</sup>Revised by Rand, A. L., Canadian Forms of the Meadow Mouse (*Microtus pennsylvanicus*), Can. Field-Nat., vol. 57, 7-8, pp. 115-123 (Jan. 24, 1944).



*Range.* Northeastern United States, northern New Brunswick\*, Quebec south of the St. Lawrence River, including Gaspé\*, southern and eastern Ontario\*, intergrading with *fontigenus* north of Ottawa River\*; Algonquin Park\*, Nipissing, and the east end of Lake Superior\*; west of the Great Lakes it intergrades with *drummondi* on the southern edges of southwestern Ontario and southeastern Manitoba (Rand, 1943). (N.B., Ont., P.Q.)

**\*Microtus pennsylvanicus acadicus** Bangs. ACADIAN MEADOW MOUSE. *Campagnol des champs de l'Acadie.*

1897. *Microtus pennsylvanicus acadicus* Bangs, Amer. Nat., vol. 31, p. 239 (March 1897).

*Type Locality.* Digby, Nova Scotia, Canada. (Type: M.C.Z., No. B2155.)

*Range.* Nova Scotia\*, Prince Edward Island\*, Grand Manan Island\*, and probably southern New Brunswick (Rand, 1943, p. 117). (N.B., N.S., P.E.I.)

**\*Microtus pennsylvanicus aphorodemus** Preble. KEEWATIN MEADOW MOUSE. *Campagnol des champs du Keewatin.*

1902. *Microtus aphorodemus* Preble, North Amer. Fauna, No. 22, p. 52 (Oct. 31, 1902).

1937. *Microtus pennsylvanicus aphorodemus* Anderson, in Canada's Western Northland (Mammals), Dept. Interior, Ottawa, p. 112 (July 9, 1937).

*Type Locality.* Barren grounds about 50 miles south of Cape Eskimo, near mouth of Thlewiaza River, Keewatin district, Canada. (Type: U.S.N.M., No. 106422.)

*Range.* Probably the barren grounds of Keewatin district, known from the type locality, and known to intergrade with *drummondi* at Churchill\*, Manitoba. (Man., N.W.T.)

**\*Microtus pennsylvanicus drummondii** (Audubon and Bachman). DRUMMOND'S MEADOW MOUSE. *Campagnol de Drummond.*

1854. *Arvicola drummondii* Audubon and Bachman, Quadr. North Amer., vol. 3, p. 106.

1897. [*Microtus*] *drummondii* Trouessart, Catal. Mamm. viv. foss., p. 563.

1899. *Microtus stonei* Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 5 (March 4, 1899). Liard River, British Columbia, Canada.

1913. *Microtus pennsylvanicus drummondii* Hollister, Can. Alp. Journ., Special number, p. 23 (Feb. 17, 1913).

1940. *Microtus pennsylvanicus rubidus* Dale, Journ. Mamm., vol. 21, p. 239 (Aug. 14, 1940). Sawmill Creek, near Telegraph Creek, British Columbia.

*Type Locality.* "Valleys of the Rocky Mountains"; probably in the vicinity of Jasper House, Alberta, Canada.

*Range.* Rocky Mountains northward from Crowsnest Pass\*, through central and northern British Columbia from mountains east of Bella Coola\*, British Columbia, north to southern\* and central\* Yukon, and east-central Alaska, to mouth of Mackenzie River\*, Northwest Territories, following the northern limit of trees to lower Anderson and Horton Rivers, southeastward to Churchill\*, Manitoba, and Fort Albany on James Bay, and Lake Attawapiskat, Thunder Bay\* and Rainy River, in western Ontario; nearly the whole of Manitoba, all of Saskatchewan except in the extreme southwest and all of Alberta except in the extreme southeast. Intergrading with *fontigenus* in western Ontario\*, with *aphorodemus* in northeastern Manitoba\*, with *insperatus* in the semi-arid parts of southern Saskatchewan\* and Alberta\*, and with *modestus* in southern and central British Columbia\*. (Alta., B.C., Man., N.W.T., Ont., Sask., Y.T.)

**\*Microtus pennsylvanicus enixus** Bangs. LABRADOR MEADOW MOUSE. *Campagnol des champs du Labrador.*

1896. *Microtus enixus* Bangs, Amer. Nat., vol. 30, p. 1051 (Dec. 1896).

1936. *Microtus pennsylvanicus enixus* Davis, D. L., Journ. Mamm., 17:3, pp. 290-291 (Aug. 14, 1936).

*Type Locality.* Hamilton Inlet, Labrador, Canada. (Type: M.C.Z., No. B3973.)

*Range.* Across the Ungava Peninsula\* from James Bay to Hamilton Inlet and Hebron, Labrador. (P.Q., Labr.)



\***Microtus pennsylvanicus fontigenus** Bangs. QUEBEC MEADOW MOUSE. *Campagnol des champs du Québec.*

1896. *Microtus fontigenus* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 48 (March 9, 1896).

1897. *Microtus pennsylvanicus fontigenus* Miller, Proc. Boston Soc. Nat. Hist., vol. 28, p. 14 (April 30, 1897).

*Type Locality.* Lake Edward, Quebec, Canada. (Type: M.C.Z., No. B3837.)

*Range.* Quebec, north of the St. Lawrence from Natashkwan, Saguenay county, westward to Gatineau county\*, and across Ontario north of the range of *pennsylvanicus* to the north shore of Lake Superior. The northern limits of the range remain to be worked out. (Ont., P.Q.)

\***Microtus pennsylvanicus insperatus** (Allen). BADLANDS MEADOW MOUSE. BEAN MOUSE. *Campagnol de Badlands.*

1894. *Arvicola insperatus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 6, p. 347 (Dec. 7, 1894).

1920. ‡*Microtus pennsylvanicus wahema* Bailey, Journ. Mamm., vol. 1, p. 72 (March 2, 1920).  
*Type locality, Glendive\*, Mont.*

1924. *Microtus pennsylvanicus modestus* Miller, North Amer. Recent Mammals, 1923, U.S.N.M., Bull. 128, p. 405. (In part.)

1943. *Microtus pennsylvanicus insperatus* Anderson, Can. Field-Nat., 57:4-5, April-May, 1943, p. 92 (Oct. 17, 1943). Revival of *insperatus* Allen (1894).

*Type Locality.* Custer, Black Hills, Custer county, South Dakota. (Type: A.M.N.H., No. 8105/6731.)

*Range.* Semi-arid regions from southeastern South Dakota (and probably parts of northeastern Wyoming), southwestern North Dakota, eastern Montana, and parts of extreme southwestern Saskatchewan and southeastern Alberta; intergrading with *drummondi* over most of its range in Canada. (Alta., Sask.)

\***Microtus pennsylvanicus labradorius** Bailey. UNGAVA MEADOW MOUSE. *Campagnol des champs d'Ungava.*

1898. *Microtus pennsylvanicus labradorius* Bailey, Proc. Biol. Soc. Wash., vol. 12, p. 88 (April 30, 1898).

*Type Locality.* Fort Chimo, Ungava, Canada. (Type: U.S.N.M., No. 186945.)

*Range.* Northern Ungava from Port Burwell\*, Hudson Strait, westward and southward to Great Whale River on east side of Hudson Bay. Its extension inland is unknown. (P.Q.)

\***Microtus pennsylvanicus modestus** (Baird). COLORADO MEADOW MOUSE. *Campagnol du Colorado.*

1857. *Arvicola modesta* Baird, Mamm. North Amer., p. 535.

1894. *Arvicola (Mynomes) microcephalus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 286, described under the name of *Arvicola [Mynomes] drummondi*, p. 287. Lac La Hache, B.C.

1900. *Microtus pennsylvanicus modestus* Bailey, North Amer. Fauna, No. 17, p. 20 (June 6, 1900).

1940. *Microtus pennsylvanicus funebris* Dale, Journ. Mamm., vol. 21, No. 3, p. 338 (August 14, 1940). Coldstream, 3½ miles southeast of Vernon, British Columbia.

*Type Locality.* Cochetopa ("Sawatch") Pass, Saguache county, Colorado. (Type: U.S.N.M., No. 594/1717, skin and skull, immature.)

*Range.* Rocky Mountains and adjacent ranges from New Mexico to northwestern Montana, central Idaho, and eastern Washington to southern interior of British Columbia from east side of Cascade Mountains to west side of Rocky Mountains (McGillivray Creek\*, Hope-Princeton Summit\*, Hedley\*, Fairview-Keremeos Summit\*, Penticton\*, Oliver\*, Westbridge\*, Rossland\*, Pend-d'Oreille River\*, Creston\*, Yahk\*, Newgate\*, Morrissey\*), north at least to Windermere, mainly in the Transition zone, intergrading through south-central British Columbia with *drummondi*. (B.C.)



**Microtus pennsylvanicus terraenovae** (Bangs). NEWFOUNDLAND MEADOW MOUSE. *Campagnol des champs de Terre-Neuve*.

1894. *Arvicola terraenovae* Bangs, Proc. Biol. Soc. Wash., vol. 9, p. 129 (July 27, 1894).

1896. *M[icrotus] terraenovae* Miller, North Amer. Fauna, No. 12, p. 66 (July 23, 1896).

1936. *Microtus pennsylvanicus terraenovae* Davis, D. L., Journ. Mamm., vol. 17, No. 3, pp. 290-291 (Aug. 14, 1936).

*Type Locality.* Codroy, Newfoundland. (Type: M.C.Z., Bangs coll.)

*Range.* Newfoundland and Penguin Island. (Nfld.)

#### *montanus* group

**\*Microtus montanus canescens** Bailey. GRAY MEADOW MOUSE. *Campagnol gris des champs*.

1898. *Microtus nanus canescens* Bailey, Proc. Biol. Soc. Wash., vol. 12, p. 87 (April 30, 1898).

1938. *Microtus montanus canescens* Hall, Proc. Biol. Soc. Wash., vol. 51, p. 133 (1938).

*Type Locality.* Conconully, Okanogan county, Washington. (Type: U.S.N.M., No. 90577.)

*Range.* Transition zone in northern Washington and lower levels in dry belt of southern British Columbia east of the Cascade Mountains (Okanagan\* and Osoyoos\* in Okanogan Valley, and Midway\* and Myers' Creek\* in Kettle River Valley). (B.C.)

#### *operarius* group

**\*Microtus operarius macfarlani** Merriam. MACFARLANE'S TUNDRA MOUSE. CANADIAN TUNDRA MOUSE. *Campagnol arctique*.

1900. *Microtus macfarlani* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 24 (March 14, 1900).

1909. *Microtus operarius endoecus* Osgood, North Amer. Fauna, No. 30, p. 29 (Oct. 7, 1909). Mouth of Charlie Creek, about 50 miles above Circle, Alaska. (Type: U.S.N.M., No. 128327.)

1937. *Microtus operarius macfarlani* Anderson, Mammals and Birds of Western Arctic Dist., in Canada's Western Northland, Dept. of Interior, Ottawa, p. 112 (July 9, 1937).

*Type Locality.* Fort Anderson, Anderson River, Mackenzie district, Northwest Territories, Canada. (Type: U.S.N.M., No. 9155/37347.)

*Range.* From inland tundra areas of Yukon River Valley in eastern Alaska and through central and northern Yukon (Canol Road at higher altitudes, Rose River\* and Macmillan Pass area\* in both Yukon and Northwest Territories); Lapierre House, Old Crow River, Firth River; to northern part of Mackenzie delta (Aklavik\*, Tuktoyaktok\*, Toker Point); Anderson River, Franklin Bay, Langton Bay, and south side of Coronation Gulf\*. (N.W.T., Y.T.)

#### *townsendii* group<sup>1</sup>

**\*Microtus townsendii townsendii** (Bachman). TOWNSEND MEADOW MOUSE. *Campagnol de Townsend*.

1839. *Arvicola townsendii* Bachman, Journ. Acad. Nat. Sci. Phila., vol. 8, pt. 1, p. 60.

1885. *Arvicola townsendi* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 597 (1885). (Part.)

1896. *M[icrotus] townsendi* Miller, North Amer. Fauna, No. 12, p. 66 (July 23, 1896).

1936. *Microtus townsendii townsendii* Hall, The Murrelet, vol. 17, p. 15 (March 28, 1936).

*Type Locality.* Columbia River; according to Bailey (North Amer. Fauna, No. 17, p. 46, June 6, 1900), near mouth of Willamette, on or near Wappatoo (or Sauvie) Island. (No type designated.)

*Range.* In Canada extends only to Port Moody, Huntingdon\*, and Chilliwack\*, in extreme southwestern British Columbia, south of the lower Fraser River, from thence south in low country west of the Cascades to the Willamette Valley and Yaquina Bay, Oregon. (B.C.)

<sup>1</sup> Revised by Anderson and Rand, Townsend Vole (*Microtus townsendi*) in Canada, Can. Field-Nat., vol. 57: No. 4-5, April-May, 1943, pp. 73-74 (Oct. 17, 1943).



**Microtus townsendii cummingi** Hall. BOWEN ISLAND MEADOW MOUSE. *Campagnol de l'île Bowen*.

1936. *Microtus townsendii cummingi* Hall, The Murrelet, vol. 17, January 1936, pp. 15-16 (March 28, 1936).

*Type Locality.* Bowen Island, Howe Sound, British Columbia. (Type: M.V.Z., No. 68836.)

*Range.* Restricted to Bowen Island, British Columbia. (B.C.)

†**Microtus townsendii laingi** Anderson and Rand. LARGE VANCOUVER ISLAND MEADOW MOUSE. *Gros campagnol de l'île de Vancouver*.

1943. *Microtus townsendii laingi* Anderson and Rand, Can. Field-Nat., 57:4-5, April-May, 1943, pp. 73-74 (Oct. 17, 1943).

*Type Locality.* Port Hardy, on Queen Charlotte Strait, northeastern end of Vancouver Island. (Type, N.M.C., No. 13423.)

*Range.* The northern part of Vancouver Island, south to Beaver Creek west of Port Alberni (Cape Scott\*, Hurst Island, Port Hardy\*, Sayward\*, Shushartie\*, Upper Campbell River\*). (B.C.)

\***Microtus townsendii tetramerus** (Rhoads). SOUTHERN VANCOUVER ISLAND MEADOW MOUSE. *Campagnol de l'île de Vancouver*.

1894. *Arvicola (Tetramerodon) tetramerus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 283 (Oct. 23, 1894).

1900. *Microtus tetramerus* Bailey, North Amer. Fauna, No. 17, p. 47 (June 6, 1900).

1936. *Microtus townsendii tetramerus* Hall, The Murrelet, vol. 17, p. 15 (March 28, 1936).

*Type Locality.* Beacon Hill Park, Victoria, Vancouver Island, British Columbia, Canada. (Type: A.N.S. Phila., No. 327, ad., coll. of S. N. Rhoads.)

*Range.* Known only from the vicinity of Victoria\*, in southern end of Vancouver Island. Range may perhaps be correlated with the distribution of the Madrona-Oak Transition section of Coast Forest, which on Vancouver Island is restricted to the southeastern part. (B.C.)

### *longicaudus* group<sup>1</sup>

\***Microtus longicaudus macrurus** Merriam. OLYMPIC LONG-TAILED MEADOW MOUSE. *Campagnol à queue longue olympique*.

1898. *Microtus macrurus* Merriam, Proc. Acad. Nat. Sci. Phila., p. 353 (Oct. 4, 1898).

1938. *Microtus longicaudus macrurus* Goldman, Journ. Mamm., vol. 19, No. 4, p. 491 (Nov. 14, 1938).

*Type Locality.* Lake Cushman, Olympic Mountains, Mason county, Washington. (Type: U.S.N.M., No. 66151.)

*Range.* Olympic Mountains and around Puget Sound, Washington, and along the British Columbia coast from Fraser River at least to Dean Channel\*, inland to Alta Lake, Hagensborg\*, Stuie\*, and Mount Brilliant\*, Rainbow Mountains. (B.C.)

\***Microtus longicaudus mordax** (Merriam). IDAHO LONG-TAILED MEADOW MOUSE. *Campagnol à queue longue d'Idaho*.

1891. *Arvicola (Mynomes) mordax* Merriam, North Amer. Fauna, No. 5, p. 61 (July 30, 1891).

1897. [*Microtus*] *mordax* Trouessart, Catal. Mamm. viv. foss., p. 564.

1938. *Microtus longicaudus mordax* Goldman, Journ. Mamm., vol. 19, No. 4, p. 491 (Nov. 14, 1938).

*Type Locality.* Sawtooth (or Alturas) Lake, east base of Sawtooth Mountains, Blaine county, Idaho. Altitude, 7,200 feet. (Type: U.S.N.M., No. 24231/13165.)

<sup>1</sup>Revised by Anderson, R. M. and Rand, A. L., The Long-tailed Meadow Mouse (*Microtis longicaudus*) in Canada, Can. Field-Nat., 58: 1, Jan.-Feb., 1944, pp. 19-21 (April 14, 1944).



*Range.* From eastern Washington and Idaho north into the interior dry belt of southern British Columbia; intergrading with *M. l. vellerosus* in the vicinity of Rossland\*, B.C., and Waterton Lakes National Park\* in southwestern Alberta. (Alta., B.C.)

\**Microtus longicaudus vellerosus* J. A. Allen. NORTHERN LONG-TAILED MEADOW MOUSE. *Campagnol à queue longue du Nord.*

1899. *Microtus vellerosus* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 7 (March 4, 1889). Upper Liard River, British Columbia, Canada.  
 1899. *Microtus cautus* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 7 (March 4, 1899). Hell's Gate, Liard River, British Columbia, Canada. (Type: A.M.N.H., No. 14405.)  
 1924. *Microtus mordax mordax* Miller, North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 415 (March 18, 1924).  
 1944. *Microtus longicaudus vellerosus* Anderson and Rand, Can. Field-Nat., vol. 58, No. 1, pp. 20-21 (April 1, 1944).

*Type Locality.* Upper Liard River, British Columbia, Canada. (Type: A.M.N.H., No. 14403.)

*Range.* Southern Yukon (Canol Road—Lapic River\*, Macmillan Pass\*, Nisutlin River\*, Ross River\*, Sheldon Lake\*) and adjacent parts of Alaska, southwestern Mackenzie district in Northwest Territories, and southward over British Columbia (excluding the coastal mountains and the interior dry belt) to Pend-d'Oreille\*, Rossland\*, and Yahk\*, intergrading with *M. l. mordax* in vicinity of Rossland; on the western slope of Rocky Mountains to Fernie\* and Morrissey\* and on the Alberta side of the mountains to Jasper\*, Banff\*, Crowsnest\*, and Waterton Lakes\* where it again intergrades with *M. l. mordax*. Two isolated specimens from Great Plains region in southern Alberta just north of Sweet Grass Hills\* are somewhat larger and paler but are provisionally referred to *vellerosus*. (Alta., B.C., N.W.T., Y.T.)

#### *chrotorrhinus* group

\**Microtus chrotorrhinus chrotorrhinus* (Miller). ROCK VOLE. *Campagnol des roches.*

1894. *Arvicola chrotorrhinus* Miller, Proc. Boston Soc. Nat. Hist., vol. 26, p. 190 (March 24, 1894).  
 1896. *Microtus chrotorrhinus* Bangs, Proc. Biol. Soc. Wash., vol. 10, p. 49 (March 9, 1896).

*Type Locality.* Head of Tuckerman's Ravine, Mount Washington, Coos county, New Hampshire. Altitude, 5,300 feet. (Coll. of G. S. Miller, Jr., No. 2522.)

*Range.* Mount Washington, New Hampshire; the Catskills (New York), eastern Quebec (Mount Albert, Gaspe, altitude 3,500 feet\*), and central Quebec, northern New Brunswick (Grand River\*), and central Ontario west to east side of Lake Superior (Pancake Bay\*) and north side as far west as Schreiber\*. (N.B., Ont., P.Q.)

*Microtus chrotorrhinus rarus* Bangs. GRAY LABRADOR ROCK VOLE. *Campagnol gris des roches.*

1898. *Microtus chrotorrhinus rarus* Bangs, Proc. Biol. Soc. Wash., vol. 12, p. 188 (Nov. 16, 1898).

*Type Locality.* Black Bay, Strait of Belle Isle, Labrador, Canada. (Type: M.C.Z., No. B7951.)

*Range.* Known for 30 years by only 5 specimens from the type locality on Strait of Belle Isle, but the range was extended much farther north on the Atlantic coast of Labrador by 2 specimens obtained by the Donald B. MacMillan expedition of 1927-28 at Port Manvers and Curlew Harbour (in Chicago Museum of Natural History, determined by Colin C. Sanborn). *M. c. rarus* as far as known is restricted to the Labrador coast, but possibly occurs for some distance into Quebec along the north shore of the Gulf of St. Lawrence, although



C. F. Jackson (1938, p. 433) states that 2 specimens from Moisie River and Seal River were compared with topotypes of *ravus* and are undoubtedly referable to *M. c. chrotorrhinus*. (Labr.)

*xanthognathus* group

\**Microtus xanthognathus* (Leach). YELLOW-CHEEKED MEADOW MOUSE. *Campagnol à joues jaunes*.

1815. *Arvicola xanthognatha* Leach, Zool. Miscell., vol. 1, p. 60.

1885. *Arvicola xanthognathus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 597 (1885).

1896. *M[icrotus] xanthognathus* Miller, North Amer. Fauna, No. 12, p. 66 (July 23, 1896).

*Type Locality.* Hudson Bay. (Type specimen not known.)

*Range.* Northwestern Canada and Alaska, from northern Manitoba (Churchill and Nelson River) to central Alberta, north to the Arctic coast, east of Anderson River and west to central Alaska. Apparently local in distribution, but sometimes common in favourable areas. Two specimens in N.M.C.: one from Bern Creek\*, Yukon, on Alaska-Yukon International Boundary, and one from southwestern Mackenzie district, 30 miles up Willow River\*. (Alta., Man., N.W.T., Y.T.)

Subgenus *Stenocranius* Kastchenko

1901. *Stenocranius* Kastchenko, Annuaire du Musée Zoologique, St. Pétersbourg, VI, p. 167. Type, *Microtus slowzowi* Poljakoff, Omsk, Siberia.

E. W. Nelson (1931, A New Vole of the subgenus *Stenocranius* from Alaska, Journ. Mamm., vol. 12, No. 3, pp. 310-312, Aug. 24, 1931) states that "Mr. Gerrit S. Miller, Jr., has already directed attention to the fact that *Microtus miurus*, and its relatives, of the genus *Microtus*, represent another group of Asiatic mammals that crossed the great land bridge to Alaska.....The American range of *Stenocranius*, now known only from Alaska, is curiously similar to that of *Ovis dalli*. It appears obvious that the time of first occupation of this continent by both these voles and the white mountain sheep was much more recent than that of other representatives of *Microtus* and *Ovis* which now range south, respectively, to Guatemala and northern Mexico.....In North America the group is now known only from Alaska, where it is represented by *Microtus a. abbreviatus*, *M. abbreviatus fisheri*, and *M. innuitus*, large and rather aberrant forms from islands in Bering Sea; *M. m. miurus* and *M. miurus oreas* respectively from mountains on the Kenai Peninsula and from near Mount McKinley and easterly along the Alaska Range to the head of Jarvis Creek; and the species here described [*Microtus muriei*] from the Endicott Mountains [Kutuk River, a tributary of Alatna River, northwestern Alaska].

"In his original description of *M. miurus* Osgood refers to the relationship between that species and the very distinct *M. abbreviatus* of Hall Island. It may be added that the last named, with *M. abbreviatus fisheri* from St. Matthew Island and *M. innuitus* from St. Lawrence Island, constitute a rather aberrant group of large forms within the subgenus."

Ellerman (The Families and Genera of Living Rodents, Brit. Mus. Nat. Hist., vol. II, March 21, 1941) provisionally accepts the validity of *Stenocranius* (in part) as a subgenus including 2 Palearctic species, *gregalis* and *major*, but states that no members of the Alaskan species have been examined. As both Miller and Nelson had access to all the Alaskan forms as well as to large collections from central and northern Asia it seems advisable to follow their classification for the present.

Nelson's paper (1931, op. cit., p. 312) suggested that members of this group of voles may occur above timber-line on the mountains of northern Yukon, where search should be made for them. In 1943 C. H. D. Clarke of the



National Parks Bureau while engaged in biological reconnaissance work along the Alaska Military Highway shot 2 specimens of a "singing mouse" near Tepee Lake above timber-line on north slope of St. Elias Range in southwestern Yukon which proved to belong to this group and is described on following pages as a new species and the first recorded occurrence of this subgenus in Canada.

†\**Microtus andersoni* Rand. MACKENZIE ALPINE VOLE. *Campagnol alpin du Mackenzie*.

1945. *Microtus andersoni* Rand, Mammal Investigations on the Canol Road, Yukon and Northwest Territories, 1944; Nat. Mus., Canada, Bull. No. 99, pp. 42-44 (1945).

*Type Locality.* Near headwaters of Little Keele River, 82 miles west of Mackenzie River on the Canol Road, Mackenzie district, Northwest Territories, Canada; altitude 5,500 feet; collected by W. H. Bryenton, Sept. 9, 1944. (Type: N.M.C., No. 18107, male, adult.)

*Range.* Known only by four specimens from the type locality, which is far above timber-line.

This new species is considered by the describer to be more closely related to the Alaskan species *Microtus miurus*, *M. muriei*, and *M. abbreviatus* than to any other American forms, and he suggested that they be included in a provisional new "*abbreviatus*" group. Their relationships within the subgenus *Microtus* have not been thoroughly worked out with adequate material, and for reasons stated above, the present writer is provisionally listing this new form, and another from southwestern Yukon described below, under the subgenus *Stenocranius* Kastchenko. (N.W.T.)

†\**Microtus cantator*, new species. YUKON SINGING MOUSE. *Campagnol chanteur du Yukon*.

*Type.* Register of Mammals, National Museum of Canada, No. 17236, male, skin and skull; taken in tundra-slide above timber-line on mountain top near Tepee Lake on north slope of St. Elias Range. Tepee Lake is at head of Harris Creek, which runs west-northwest into Genero River, which runs north into White River, a tributary of Yukon River; about 21 miles east of Alaska-Yukon International Boundary, about latitude 61° 35' N., longitude 140° 22' W.; about 18 miles southeast of Canyon City (on White River); about 18 miles northeast of Mount Constantine and Klutlan Glacier; and about 45 miles northwest of northwest arm of Kluane Lake. Original number 711.

*Diagnosis.* Skull typical of *Stenocranius* group; very light, long and narrow; brain case and zygomatic arches with sides nearly parallel; skull low and somewhat depressed interorbitally. Compared with 10 specimens of *Microtus miurus oreas* from Mount McKinley region, Alaska, the nearest known neighbours of the same group, the 2 *cantator* specimens are only about two-thirds the length of 10 adult specimens of *M. m. oreas*, and skulls smaller in proportion; upper parts with hair plumbeous basally with dull brownish ochraceous tips, black-tipped guard hairs extremely sparse and not darkening the colour to any extent; under parts plumbeous at base, tipped with dirty whitish, slightly washed with buffy; ears small, nearly concealed by hair, without spotting; tail above dull brownish, similar to back, under side ochraceous buff, with buffy pencil at tip; back of tail and around tail dull brownish; tops of feet greyish with scarcely any buffy tinge. *M. m. oreas* in both young and adults are readily separated by having the upper parts and sides a bright orange-ochraceous colour and under parts pale ochraceous buff; tail ochraceous with only slight trace of dusky above. *M. muriei* has upper parts practically uniform dusky drab-grey, darkened by overlying black tips of guard hairs; ears marked with small, indistinct buffy spots; tops of all feet dull, pale buffy.

*Measurements.* Type of *M. cantator* and paratype (No. 17327): total length, 101.5, 101.0; tail vertebræ, 26.5, 26.0; hind foot, 19.0, 18.5; skull:



condylobasal length, 24.3, 23.0; zygomatic arches, greatest width, 10.7, 11.0; brain case, greatest width, 9.0, 12.0; length of nasals, 6.5, 6.0; basal length of rostrum, 4.0, 4.0. The type of *M. muriei* measured: total length, 119; tail vertebræ, 24; hind foot, 20 mm. Six specimens of adult male *M. m. oreas* measured, average: total length, 150.0; tail vertebræ, 21.8; hind foot, 21.2 mm.

*Range.* Known only by specimens from type locality, but "singing" voles were reported from similar habitats in other parts of the region west of Kluane Lake, Yukon.

*Remarks.* Dr. Clarke states: "In the alplands of the St. Elias area, and in most forests near timber-line, I found a small mouse which had the peculiar habit of coming frequently to an entrance of its runway and singing, in a voice similar to that known for shrews and house mice. In my experience shrews sing rarely and the song heard by me from shrews was more sustained than that of the mice in question. I finally shot two singing animals, both males, at Tepee Lake, Yukon, August 15 (1943)." (Y.T.)

#### Subgenus *Aulacomys* Rhoads. Water-voles

1894. *Aulacomys* Rhoads, Amer. Nat., vol. 28, p. 182 (Feb. 1894). Type, *Aulacomys arvicoloides* Rhoads=*Microtus richardsoni arvicoloides* (Rhoads).

See also Anderson, R. M., and Rand, A. L. Status of the Richardson Vole (*Microtus richardsoni*) in Canada, Can. Field-Nat., vol. 57, No. 6, pp. 106-107 (Dec. 10, 1943).

\**Microtus richardsoni richardsoni* (DeKay). RICHARDSON'S MEADOW MOUSE. WATER-VOLE. *Campagnol d'eau de Richardson*.

1842. *A[rvicola] richardsoni* DeKay, Zool. New York, Mammals, p. 91.

1894. *Aulacomys richardsoni* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 288 (Oct. 23, 1894).

1891. *Arvicola (Mynomes) macropus* Merriam, North Amer. Fauna, No. 5, p. 60 (July 30, 1891). Pahsimeroi Mountains, Custer county, Idaho. (In part.)

1894. *Aulacomys arvicoloides* Rhoads, Amer. Nat., vol. 29, p. 940 (Oct. 1895). Lake Keechelus, Kittitas county, Washington, altitude 8,000 feet. (In part.)

1897. [*Microtus*] *richardsoni* Trouessart, Catal. Mamm. viv. foss., p. 565.

1912. *Microtus richardsoni richardsoni* Miller, North Amer. Land Mamm., U.S. Nat. Mus., Bull. 79, p. 224 (Dec. 31, 1912).

*Type Locality.* "Near the foot of the Rocky Mountains." According to Bailey (North Amer. Fauna, No. 17, p. 60), the type was collected by Drummond in the vicinity of Jasper House, Alberta.

*Range.* In Canada ranges at high altitudes in Alberta from Waterton Lakes National Park\* north at least to Jasper Park\* in the Rocky Mountains, and in various ranges in southern British Columbia (Monashee Mountains, Rossland\*; Cascade Mountains, Hope-Princeton summit\*; McGillivray Creek\*; Coast Range, Lihumitson Park\*, Alta Lake, etc.).

Specimens of these large mountain water-voles from several Canadian areas were studied by Anderson and Rand (1943, op. cit.). Certain populations of this species have been variously referred to *arvicoloides* or *macropus* and although these 2 forms may be valid in topotypical or other extralimital material, the conclusion is that all our available Canadian specimens must be referred to *M. r. richardsoni*. (Alta., B.C.)

#### Subgenus *Chilotus* Baird

1857. *Chilotus* Baird, Mamm. North Amer., p. 516. Type, *Arvicola oregoni* Bachman.

\**Microtus oregoni serpens* Merriam. AGASSIZ MEADOW MOUSE. *Campagnol d'Agassiz*.

1897. *Microtus serpens* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 75 (April 21, 1897).

1929. *Microtus oregoni serpens* Taylor and Shaw, Prov. List Land Mammals of State of Washington, Occasional Papers of Chas. R. Conner Museum, State College of Washington, No. 2, p. 25.

*Type Locality.* Agassiz, British Columbia, Canada. (Type: U.S.N.M., No. 76303.)



*Range.* Low country of southwestern British Columbia (Agassiz, Chilliwack\*, Huntingdon\*, Langley, Port Moody, Sumas, Thurston's\*, Vancouver), and northwestern Washington between the Cascade Mountains and Puget Sound. (B.C.)

### Genus *Pedomys* Baird

1857. *Pedomys* Baird, Mamm. North Amer., p. 517. Type, *Arvicola austerus* LeConte=*Hypudaeus ochrogaster* Wagner. Regarded as a subgenus of *Microtus* by Miller, List North Amer. Recent Mammals, 1923 (1924), as revised by Bailey, North Amer. Fauna, No. 17, 1900. Considered as a genus by Ellerman, Families and Genera of Living Rodents, British Museum (Natural History), 1941, vol. 2, p. 621, issued March 21, 1941.

\**Pedomys minor* (Merriam). LITTLE UPLAND MOUSE. *Petit campagnol des Prairies*.

1888. *Arvicola austerus minor* Merriam, Amer. Nat., vol. 22, p. 600 (July 1888).  
1900. *Microtus minor* Bailey, North Amer. Fauna, No. 17, p. 75 (June 6, 1900).  
1941. *Pedomys minor* Ellerman, Families and Genera Recent Rodents, vol. 2, p. 621 (March 21, 1941).

*Type Locality.* Bottineau, at base of Turtle Mountains, Bottineau county, North Dakota. (Type: U.S.N.M., No. 186493.)

*Range.* Northern border of the Great Plains from northeastern North Dakota to Edmonton, Alberta, and southeastward to Minneapolis, Minnesota. (Alta., Man., Sask.)

### Genus *Pitymys* McMurtrie.<sup>1</sup> Pine-mice

1831. *Pitymys* McMurtrie, Cuvier's Anim. Kingdom, Amer. ed., vol. 1, p. 434. Type, *Psammomys pinetorum* LeConte.

\**Pitymys pinetorum scalopsoides* (Audubon and Bachman). NORTHERN PINE MOUSE. *Campagnol des pins du Nord*.

1841. *Arvicola scalopsoides* Audubon and Bachman, Proc. Acad. Nat. Sci. Phila., vol. 1, p. 97 (Oct. 1841).  
1896. *Microtus pinetorum scalopsoides* Batchelder, Proc. Boston Soc. Nat. Hist., vol. 27, p. 187 (Oct. 1896).  
1912. *Pitymys pinetorum scalopsoides* Miller, North Amer. Land Mamm. 1911, p. 229 (Dec. 31, 1912).

*Type Locality.* Long Island, New York. (No type designated; described from a number of specimens from Long Island.)

*Range.* Southern New York and westward to Illinois, southward along the coast, blending into true *pinetorum*. In Canada known only to occur in southern Ontario (Middlesex county near London, and Elgin county near Eden, 7 miles south and east of Tillsonburg). (Ont.)

### Genus *Lemmiscus* Thomas.<sup>2</sup>

1912. *Lemmiscus* Thomas, Ann. and Mag. Nat. Hist., ser. 8, vol. 9, p. 401. April 1912. Type, *Arvicola curtata* Cope.

\**Lemmiscus curtatus pallidus* (Merriam). PALLID PYGMY VOLE. *Pâle campagnol pygmé*.

1888. *Arvicola* [*Chilotus*] *pallidus* Merriam, Amer. Nat., vol. 22, p. 704. August 1888.  
1912. [*Lagurus*] *pallidus* Thomas, Ann. and Mag. Nat. Hist., ser. 8, vol. 9, p. 401. April 1912.  
1941. *Lemmiscus curtatus pallidus* Goldman, Proc. Biol. Soc. Washington, vol. 54, p. 70. July 31, 1941.

*Type Locality.* Fort Buford, Williams county, North Dakota. (Type: U.S.N.M., No. 186498.)

*Range.* Restricted to local areas of sage-brush and short-grass on the high plains of the semi-arid division of the Transition zone at elevations of between

<sup>1</sup>Revised by Bailey, North Amer. Fauna, No. 17, pp. 62-67 (June 6, 1900).

<sup>2</sup>Revised by Vernon Bailey, North American Fauna, No. 17, under Genus *Lagurus*, pp. 67-70, June 6, 1900. The subgenus *Lemmiscus* was raised to full generic rank by W. B. Davis, Recent Mammals of Idaho, 1929, p. 325, the genus *Lagurus* (*Lagurus* Gloger, Gemeinn. Hand- u. Hilfsbuch d. Naturgesch., vol. 1, p. 97; type, *Lagurus migratorius* Gloger=*Mus lagurus* Pallas) being considered as restricted to Old World forms. See also Goldman, Remarks on voles of the Genus *Lemmiscus*, with one described as new, Proc. Biol. Soc. Washington, vol. 54, pp. 69-72 (July 31, 1941).



2,000 and 3,400 feet above sea-level, from western North Dakota, eastern Montana, southwestern Saskatchewan\*, Battle Creek\*, Big Muddy Lake\*, Eastend\*, Val Marie\*, and southern Alberta as far as Calgary and Little Sandhill Creek\*, Red Deer River. (For details on distribution and life history, See Soper, J. Dewey (1931, Field notes on the pallid meadow mouse, *Lemmus pallidus* (Merriam), Can. Field-Nat., vol. 45, No. 9, pp. 209-214, figs. 4.) (Alta.\*, Sask.\*))

Genus *Ondatra* Link.<sup>1</sup> Muskrats

1795. *Ondatra* Link, Beyträge zur Naturgesch., vol. 1, pt. 2, p. 76. Type by tautonymy, *Castor zibethicus* Linnaeus.<sup>2</sup>

\**Ondatra zibethica zibethica* (Linnaeus). EASTERN MUSKRAT. *Rat musqué*.

1766. [*Castor*] *zibethicus* Linnaeus, Syst. Nat., ed. 12, vol. 1, p. 79.  
 1795. [*Ondatra*] *zibethicus* Link, Beyträge zur Naturgesch., vol. 1, pt. 2, p. 76.  
 1885. *Fiber zibethicus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885).  
 1912. *Ondatra zibethica zibethica* Miller, North Amer. Land Mamm. 1911, p. 230 (Dec. 31, 1912).

*Type Locality.* Eastern Canada. ("Specimens from eastern New Brunswick assumed to be typical" (Hollister, 1911-16).) (No type designated.)

*Range.* Southeastern Canada, northeastern and east-central United States; from New Brunswick and Quebec west to Minnesota, and presumably southeastern Manitoba, south to northern Georgia and Arkansas, except along the Atlantic seaboard south of Delaware Bay. (Man., N.B., N.S., Ont., P.E.I., P.Q.)

\**Ondatra zibethica alba* (Sabine). HUDSON BAY MUSKRAT. *Rat musqué de la baie d'Hudson*.

1823. *Fiber zibethicus-albus* Sabine, Franklin's Narrative, Journ. to Polar Sea, p. 660.  
 1902. *Fiber zibethicus hudsonius* Preble, North Amer. Fauna, No. 22, p. 53 (Oct. 31, 1902).  
 Fort Churchill, Keewatin. (Type: U.S.N.M., No. 106881.)  
 1911. *Fiber zibethicus albus* Hollister, North Amer. Fauna, No. 32, p. 20 (April 29, 1911).  
 1912. *Ondatra zibethica alba* Miller, North Amer. Land Mamm. 1911, p. 231 (Dec. 31, 1912).

*Type Locality.* Cumberland House, Saskatchewan, Canada. (Type probably not in existence; not in Br. Mus. (Hollister, 1911, p. 21).)

*Range.* Waters draining into Hudson Bay from the west, in eastern Saskatchewan and Keewatin; north to the Barren Grounds. (Man., N.W.T., Sask.)

\**Ondatra zibethica aquilonia* (Bangs). LABRADOR MUSKRAT. *Rat musqué de la baie d'Hudson*.

1899. *Fiber zibethicus aquilonius* Bangs, Proc. New England Zool. Club, vol. 1, p. 11 (Feb. 28, 1899).  
 1912. *Ondatra zibethica aquilonia* Miller, North Amer. Land Mamm. 1911, p. 230 (Dec. 31, 1912).

*Type Locality.* Rigolet, Hamilton Inlet, Labrador, Canada. (Type: coll. of E. A. and O. Bangs, M.C.Z., No. 3957.)

*Range.* Labrador from Strait of Belle Isle northward (Black Bay, Hamilton Inlet, Lance au Loup), and eastern part of Ungava Peninsula, Quebec, north to Chimo\*. (Labr., P.Q.)

\**Ondatra zibethica cinnamomina* (Hollister). GREAT PLAINS MUSKRAT. *Rat musqué de grandes prairies*.

1910. *Fiber zibethicus cinnamominus* Hollister, Proc. Biol. Soc. Wash., vol. 23, p. 125 (Sept. 2, 1910).  
 1912. *Ondatra zibethica cinnamomina* Miller, North Amer. Land Mamm. 1911, p. 232 (Dec. 31, 1912).

*Type Locality.* Wakeeney, Trego county, Kansas. (Type: U.S.N.M., No. 186518.)

<sup>1</sup>Revised (under name *Fiber*) by Hollister, North Amer. Fauna, No. 32, Par. 29, 1911.

<sup>2</sup>International Commission on Zoological Nomenclature, Opinion 55, Smiths. Inst. Publ. 2169, pp. 126-127 (May 12, 1913).



*Range.* Great central plains region of western United States and Canada; from southwestern Manitoba, southern Saskatchewan, and Alberta south to northern Texas; east to central Iowa and west to the Rocky Mountains. (Alta., Man., Sask.)

‡\**Ondatra zibethica osoyoosensis* (Lord). ROCKY MOUNTAIN MUSKRAT. *Rat musqué des Rocheuses.*

1863. *Fiber osoyoosensis* Lord, Proc. Zool. Soc. London, p. 97.

1910. *F(iber) z(ibethicus) osoyoosensis* Hollister, Proc. Biol. Soc. Wash., vol. 23, p. 1 (Feb. 2, 1910).

1912. *Ondatra zibethica osoyoosensis* Miller, North Amer. Land Mamm. 1911, p. 231 (Dec. 31, 1912).

*Type Locality.* Lake Osoyoos, British Columbia, Canada. (Type: Brit. Mus., Nat. Hist., No. 62.12-30.6.)

*Range.* Puget Sound region and Rocky Mountains, from southern British Columbia, Washington, Idaho, and western Montana, south in the mountains to northern New Mexico. (Alta., B.C.)

\**Ondatra zibethica spatulata* (Osgood). NORTHWESTERN MUSKRAT. *Rat musqué du Nord-ouest.*

1900. *Fiber spatulatus* Osgood, North Amer. Fauna, No. 19, p. 36 (Oct. 6, 1900).

1912. *Ondatra zibethica spatulata* Miller, North Amer. Land Mamm. 1911, p. 231 (Dec. 31, 1912).

*Type Locality.* Lake Marsh, Yukon, Canada. (Type: U.S.N.M., No. 98567.)

*Range.* Northwestern North America, from Kowak River (east of Kotzebue Sound) and Yukon Valley in Alaska, through the lower parts of Yukon to the Arctic coast, north to Richards Island in Mackenzie delta, Northwest Territories, south and east to Anderson River, Great Bear, and Great Slave Lakes, and south into northeastern British Columbia and north-central Alberta; probably also into northwestern Saskatchewan. (Alta., B.C., N.W.T., Y.T.)

*Ondatra obscura* (Bangs). NEWFOUNDLAND MUSKRAT. *Rat musqué de Terre-Neuve.*

1894. *Fiber obscurus* Bangs, Proc. Biol. Soc. Wash., vol. 9, p. 133 (Sept. 15, 1894).

1912. *Ondatra obscura* Miller, North Amer. Land Mamm. 1911, p. 230 (Dec. 31, 1912).

*Type Locality.* Codroy, Newfoundland. (Type: M.C.Z., No. 1155, Bangs collection.)

*Range.* Newfoundland. (Nfld.)

#### Family MURIDAE

##### Subfamily Murinae. Old World Rats and Mice

##### Genus *Rattus* G. Fischer

1803. *Rattus* [sic] G. Fischer, Das Nationalmuseum der Naturgeschichte zu Paris, vol. 2, p. 128. Type, *Mus decumanus* Pallas=*M. norvegicus* Erxleben.<sup>1</sup>

##### Subgenus *Epimys* Trouessart

1881. *Epimys* Trouessart, Bull. Soc. d'Etudes Sci. d'Angers, vol. 10, fasc. 2, p. 117. Type, by subsequent designation (Miller, Proc. Biol. Soc. Wash., vol. 23, p. 58, April 19, 1910), *Mus rattus* Linnaeus.

1917. *Epinomys* Elliot, Check-List Mamm. North Amer., Suppl., p. 41. (Substitute for *Epimys*.)

##### Subgenus *Rattus* G. Fischer

\**Rattus norvegicus* (Erxleben). HOUSE RAT. BROWN RAT. *Rat. Surmulot.*

1777. [*Mus*] *norvegicus* Erxleben, Syst. Regni Anim., vol. 1, p. 381.

1916. *Rattus norvegicus* Hollister, Proc. Biol. Soc. Wash., vol. 29, p. 126 (June 6, 1916).

*Type Locality.* Norway. Introduced and widely established in North America. Formerly known as *Mus decumanus* Pallas (Nov. sp. quadr. glir. ord.,

<sup>1</sup>See Hollister, Proc. Biol. Soc. Wash., vol. 29, p. 126 (June 6, 1916); Thomas, Ann. and Mag. Nat. Hist., ser. 8, vol. 18, p. 240 (Aug. 1916); Hollister, Proc. Biol. Soc. Wash., vol. 29, pp. 206-207 (Sept. 22, 1916).



p. 91, 1778). For change See Rehn, Proc. Biol. Soc. Wash., vol. 13, p. 167 (Oct. 31, 1900). (Type specimen not designated.)

**Range.** An Old World species which first came on ships with the early settlers, and the stock has been continually replenished, spreading out through the settled districts, and travelling in freight cars with shipments of goods and on inland waterways has reached most of the long-settled parts of all the provinces. Absent from some isolated settlements, particularly in the mountains of central British Columbia and in the Far North where conditions are unfavourable. (Ont., P.E.I., P.Q., Sask., Y.T., Alta., B.C., Man., N.B., N.S., N.W.T.)

**Rattus rattus alexandrinus** (Geoffroy). ROOF RAT. EGYPTIAN RAT. *Rat des toits*.

1803. *Mus alexandrinus* Geoffroy, Catal. Mammif. du Mus. Nat. d'Hist. Nat., Paris, p. 192.

1918. *R[attus] rattus alexandrinus* Hinton, Journ. Bombay Nat. Hist. Soc., vol. 26, p. 63 (Dec. 20, 1918).

**Type Locality.** Alexandria, Egypt. Introduced and widely established in North America.

**Range.** Rare in most parts of the United States, occurring more commonly in the southern states; driven out of most places by the brown rat. The only eastern Canadian record is Strathroy, Ontario, February 23, 1927, where about 20 animals representing both the roof rat and the black rat came out of a case of trees from France. They were hunted out diligently and Mr. A. A. Wood made a number of skins of each species, some of which are in R.O.M.Z., Toronto. The species is said by Allan Brooks to have been common at Vancouver for several years past. (B.C., Ont.)

**\*Rattus rattus rattus** (Linnaeus). BLACK RAT. *Rat noir*.

1758. [*Mus*] *rattus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 61.

1916. *Rattus rattus* Hollister, Proc. Biol. Soc. Wash., vol. 29, p. 126 (June 6, 1916).

**Type Locality.** Upsala, Sweden. Introduced and formerly widely established in North America. (Type specimen not designated.)

**Range.** An Old World species which has been introduced into many parts of North America, commonest in southern states, but in most places has been driven out by the larger brown rat; more apt to occur in seaport towns, although several specimens were taken at Strathroy, Ontario, in 1927, from a case of trees shipped from France. There are other records from Halifax and from Vancouver, where the species is common, and the N.M.C. has two mummified specimens from Charlton Island\*, James Bay, taken in 1920. (B.C., N.S., Ont., N.W.T.)

### Genus *Mus* Linnaeus

1758. *Mus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 59. Type, *Mus musculus* Linnaeus (by tautonomy).<sup>1</sup> Upsala, Sweden.

<sup>1</sup>See Schwartz, Ernst, and Schwartz, Henrietta K., 1943, The Wild and Commensal Stocks of the House Mouse, *Mus musculus* Linnaeus, Journ. Mamm., vol. 24, No. 1, pp. 59-72. The house mice of the genus *Mus* are Old World species, with 4 recognized wild forms at the present time, ranging from the Pacific coast of Asia to the Atlantic coast in western Europe, and commensal forms dependent upon man have been carried to a large part of North and South America and become firmly established in regions settled by Europeans. The house mouse of northern North America has generally been referred to *Mus musculus musculus*, but Zimmermann (1935), Degerbøl (1940), and Schwartz and Schwartz (1943) show that the house mouse found at Upsala, Sweden, the type locality of this form, is a commensal subspecies developed from the wild *Mus musculus specilegus* of eastern Europe. Individuals of *M. m. musculus* may come into North America occasionally with shipments from Scandinavia, Poland, or Russia, but it has not been known to become established in the United States, and none is known to have been taken in Canada.

Studies by Schwartz and Schwartz (op. cit., 1943) show that 2 commensal subspecies which have been introduced into North America, *Mus musculus brevirostris* Waterhouse (1837) and *M. m. domesticus* Ratty (1772), developed from *Mus musculus wagneri* Eversmann (1848), one of the wild forms of central Asia. While Canadian specimens of the genus *Mus* can be referred to *Mus musculus* with reasonable certainty, under modern methods of rapid transportation parasitic or commensal forms may be dropped anywhere, and individual specimens should be critically examined before pronouncing on their subspecific status. Schwartz and Schwartz state, however, that "as a rule if a population of housemice is established somewhere, it remains established. Arrivals of a different type usually are not able to survive; anyway, they are not able to change the character of the established population. . . . Only where the ranges of two populations meet on a broad front, as do those of *domesticus* and *musculus* in central Germany, or where importation or immigration from various sides enters a vacuum, as in East Africa, in Asia Minor, or in North America, is there a chance of development of mixed populations produced by promiscuous interbreeding."

Specimens examined from most of the Canadian provinces from Nova Scotia to British Columbia and the Northwest Territories indicate that the house mouse populations found in Canada at the present time are referable to *Mus musculus domesticus*.



**\*Mus musculus domesticus** Ratty. HOUSE MOUSE. *Souris commune*.

1772. *Mus musculus domesticus* Ratty, Essay Nat. Hist. County Dublin, vol. 1, 1772.  
 1912. *Mus musculus musculus* Miller, List North Amer. Land Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 233 (Dec. 31, 1912).  
 1943. *Mus musculus domesticus* Schwartz and Schwartz, Journ. Mamm., vol. 24, No. 1, p. 65 (Feb. 20, 1943).

*Type Locality.* Dublin, Ireland.

*Range.* "Northern Spain, France except the Mediterranean littoral, Channel Islands, British Isles, including the Orkney and Shetland groups, and the North Atlantic Islands, viz., Hebrides, Faroes and Iceland. Also the coast of Norway, Germany as far east as the river Elbe (its range slightly east of this river overlapping with that of *M. m. musculus*), Switzerland, probably part of northern Italy, the western and southern parts of the Balkans peninsula, the Ionian Islands, and the islands of the Egean archipelago, as far east as Tenedos. Introduced populations along the oil-pipe line between Batoum and Baku in Transcaucasia ("*formosovi*"). Introduced into various parts of North America from Alaska to the northern part of the central states of the United States, also into Hawaii, the Australian mainland, and Tasmania." (Alta., B.C., Man., N.B., N.S., N.W.T., Ont., P.E.I., P.Q., Sask., Y.T.)

Superfamily DIPODOIDAE

Family APLODONTIIDAE

Genus *Aplodontia* Richardson.<sup>1</sup> Mountain Beavers

1829. *Aplodontia* Richardson, Zool. Journ., vol. 4, p. 334 (Jan. 1829). Type, *Aplodontia leporina* Richardson = *Anisonyx rufa* Rafinesque.

**\*Aplodontia rufa rufa** (Rafinesque). BROWN MOUNTAIN BEAVER. BROWN APLODONTIA. *Aplodontia brune*.

1817. *Anisonyx ? rufa* Rafinesque, Amer. Monthly Magazine, vol. 2, p. 45 (Nov. 1817).  
 1885. *Haplodon rufus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 596 (1885).  
 1886. *Aplodontia rufa* Merriam, Ann. New York Acad. Sci., vol. 3, p. 316 (May 1886).  
 1914. *Aplodontia chryscola* L. Kellogg, Univ. Calif. Publ. Zool., vol. 12, p. 295 (April 15, 1914). Jackson Lake, Siskiyou county, Calif.  
 1916. *Aplodontia rufa grisea* Taylor, Univ. Calif. Publ. Zool., vol. 12, p. 497 (May 6, 1916). Renton, near Seattle, King county, Wash.  
 1918. *Aplodontia rufa rufa* Taylor, Univ. Calif. Publ. Zool., vol. 17, No. 6, p. 454 (May 29, 1918).

*Type Locality.* Neighbourhood of Columbia River, Oregon. (Specimens from Marmot, Clackamas county, regarded by Taylor as typical. See Univ. Calif. Publ. Zool., vol. 17, p. 455 (May 29, 1918).) (Type specimen not designated.)

*Range.* Neighbourhood of Columbia River, in western Oregon, interiorly on the Pacific side of the Cascades; thence southward in a belt of unknown width to Mount Mazama in southern Oregon and the Siskiyou-Trinity district in northern California; northward to Puget Sound and the Chilliwack-Sumas region on western side of Cascade Mountains in southwestern British Columbia (Chilliwack\*, Cultus Lake\*, Huntingdon\*). (B.C.)

<sup>1</sup>Revised by Taylor, Walter P., Revision of the Rodent Genus *Aplodontia*, Univ. California Publ. Zool., vol. 17, No. 16, pp. 435-504, Pls. 25-29, text figs. 16 (May 29, 1918).



\****Aplodontia rufa rainieri*** Merriam. NORTHERN MOUNTAIN BEAVER. NORTHERN APLDONTIA. *Aplodontia du Nord*.

1899. *Aplodontia major rainieri* Merriam, Proc. Biol. Soc., Washington, vol. 13, p. 21 (Jan. 31, 1894).  
 1916. *Aplodontia californica columbiana* Taylor, Univ. Calif. Publ. Zool., vol. 12, p. 499 (May 6, 1916).  
 1918. *Aplodontia rufa columbiana* Taylor, Univ. Calif. Publ. Zool., vol. 17, p. 463 (May 29, 1918).  
 1945. *Aplodontia rufa rainieri* Dalquest and Scheffer, The Murrelet, vol. 26, p. 37 (Dec. 28, 1945).

*Type Locality.* Roab's Ranch, Hope, British Columbia, Canada. (Type: M.C.Z., No. B1899.)

*Range.* Cascade Mountains in southwestern British Columbia, from Skagit\* on the western slope near the International Boundary north to Hope\*; only two records from the drier eastern slope of Cascades (2 specimens from east side of summit of Hope-Princeton trail\* at 5,600 feet, and 2 from Stirling Creek\* near Hedley in middle Similkameen Valley at 1,700 feet).

#### Family ZAPODIDAE

#### Subfamily Zapodinae. Jumping Mice

#### Genus *Zapus* Coues<sup>1</sup>

1876. *Zapus* Coues, Bull. U.S. Geol. and Geogr. Surv. Terr., ser. 2, vol. 1, p. 253 (Jan. 8, 1876). Type, *Dipus hudsonius* Zimmermann.

\****Zapus hudsonius hudsonius*** (Zimmermann). HUDSON BAY JUMPING MOUSE. *Souris sauteuse de la baie d'Hudson*.

1780. *Dipus hudsonius* Zimmermann, Geogr. Gesch., vol. 2, p. 358.  
 1876. *Zapus hudsonius* Coues, Bull. U.S. Geol. and Geogr. Surv. Terr., ser. 2, vol. 1, p. 253 (Jan. 8, 1876).  
 1885. *Zapus hudsonius* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 600 (1885).

*Type Locality.* Hudson Bay. Considered to be Fort Severn, Ontario, type not known to be extant.

*Range.* From the southern shores of Hudson Bay south to north side of Lake Superior, west through eastern and central Manitoba, northern and central Saskatchewan, northern Alberta, northeastern British Columbia, and southern part of Mackenzie district, Northwest Territories. (Alta.\*, B.C., Man.\*, N.W.T., Ont.\*, Sask.)

\****Zapus hudsonius acadicus*** (Dawson). ACADIAN MEADOW JUMPING MOUSE. *Souris sauteuse d'Acadie*.

1856. *Meriones acadicus* Dawson, Edinburgh New Philos. Journ., new ser., III, p. 2.  
 1899. *Zapus hudsonius hudsonius* Preble, North Amer. Fauna, No. 15, p. 10 (Aug. 8, 1899).  
 1942. *Zapus hudsonius acadicus* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, for 1941, pp. 38, 52 (July 14, 1942).

*Type Locality.* Nova Scotia.

*Range.* Nova Scotia\*, Prince Edward Island\*, and northeastern New Brunswick\*. (N.B., N.S., P.E.I.)

\****Zapus hudsonius campestris*** Preble. PRAIRIE JUMPING MOUSE. *Souris sauteuse des prairies*.

1899. *Zapus hudsonius campestris* Preble, North Amer. Fauna, No. 15, p. 20 (Aug. 8, 1899).

*Type Locality.* Bear Lodge Mountains, Crook county, Wyoming. (Type: U.S.N.M., No. 65872.)

<sup>1</sup>Revised by Preble, Revision of the Jumping Mice of the Genus *Zapus*, pp. 42, figs. 4, Pl. 1; North Amer. Fauna, No. 15, pp. 13-32 (Aug. 8, 1899).



*Range.* Great Plains, from southwestern Manitoba\* and southeastern Saskatchewan, southward to Nebraska and westward to Colorado and Wyoming. (Man., Sask.)

‡\***Zapus hudsonius canadensis** (Davies). QUEBEC MEADOW JUMPING MOUSE. *Souris sauteuse du Québec.*

1798. *Dipus canadensis* Davies, Trans. Linn. Soc. London, IV, 167, Pl. VIII.

1899. *Zapus hudsonius canadensis* Batchelder, Proc. New England Zool. Club, vol. 1, pp. 3-8 (Feb. 8, 1899).

1899. *Zapus hudsonius hudsonius* Preble, North Amer. Fauna, No. 15, p. 10 (Aug. 8, 1899).

1942. *Zapus hudsonius canadensis* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, pp. 35-37, 49-52 (July 14, 1942).

*Type Locality.* Near Quebec City, Province of Quebec, Canada. (Type specimen not known.)

*Range.* From Quebec City\* east to tip of Gaspé Peninsula\* and south to western New Brunswick\*, northern Maine, New Hampshire, Vermont, and west to Adirondack Mountains of New York. (N.B., P.Q.)

\***Zapus hudsonius ladas** Bangs. LABRADOR JUMPING MOUSE. *Souris sauteuse du Labrador.*

1899. *Zapus hudsonius ladas* Bangs, Proc. New England Zool. Club, vol. 1, p. 10 (Feb. 28, 1899).

*Type Locality.* Rigolet, Hamilton Inlet, Labrador, Canada. (Type: M.C.Z., coll. of E. A. and O. Bangs, No. 4169.)

*Range.* Eastern Quebec along the north shore of Gulf of St. Lawrence from Godbout eastward (Moisie Bay\*), Trout Lake, and other localities; and on Labrador coast from Black Bay near Strait of Belle Isle north to Hamilton Inlet, probably found in suitable places in the interior as the N.M.C. has one specimen taken by A. P. Low in northwest Ungava\* in 1896. (P.Q., Labr.)

†\***Zapus hudsonius ontarioensis** Anderson. ONTARIO JUMPING MOUSE. *Souris sauteuse de l'Ontario.*

1943. *Zapus hudsonius ontarioensis* Anderson, Ann. Rept. 1942 Provancher Soc. Hist. Nat. Canada, Quebec, pp. 59-61 (English), pp. 74-76 (French) (Sept. 7, 1943).

*Type Locality.* Pancake Bay (Batchawana Bay), southeastern end of Lake Superior, Algoma district, about 40 miles northwest of Sault Ste. Marie, Ontario. (Type: N.M.C., No. 12843.)

*Range.* All parts of eastern Ontario from Lake Erie\* and Lake Ontario\* north to the Ottawa River\*; Gatineau\* and Labelle\* counties and probably parts of Pontiac and Papineau counties, Que.; north in Ontario at least to Nipissing district and west to eastern shores of Lake Superior\*. (Ont., P.Q.)

\***Zapus hudsonius tenellus** Merriam. KAMLOOPS JUMPING MOUSE. *Souris sauteuse de Kamloops.*

1897. *Zapus tenellus* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 103 (April 26, 1897).

1934. *Zapus hudsonius tenellus* Hall, Univ. Calif. Publ. Zool., 40:377 (Nov. 5, 1934).

*Type Locality.* Kamloops, British Columbia, Canada. (Type: U.S.N.M., No. 66932.)

*Range.* Dry belt of southern interior British Columbia. Specimens in U.S.N.M. from Kamloops, in A.M.N.H. from Ducks about 25 miles east of Kamloops, and in N.M.C. from Enderby\*, Kelly Lake\*, Lillooet\*, Nicola Lake\*, and Vanderhoof\*. Specimens from Ashcroft, Bowron Lake, Indianpoint Lake, and Cottonwood, B.C., are provisionally referred to *tenellus* by Cowan and Hall. (B.C.)



**\*Zapus princeps idahoensis** Davis. CENTRAL IDAHO JUMPING MOUSE. *Souris sauteuse d'Idaho central.*

1893. *Zapus princeps* Allen, Bull. Amer. Nat. Hist., vol. 5, p. 71 (April 28, 1893). Florida, La Plata county, Colorado. (In part.) Specimens from Rocky Mountains of Alberta and British Columbia have generally been referred to this form, but examination of large series of specimens leads to the conclusion that *Zapus princeps princeps* Allen does not extend its range into Canadian territory.

1834. *Zapus princeps idahoensis* Davis, W. B., Journ. Mamm., vol. 15, No. 3, pp. 221-227 (Aug. 10, 1934).

*Type Locality.* Five miles east of Warm Lake, 7,000 feet altitude, Valley county, Idaho. (Type: M.V.Z., No. 54845.)

*Range.* "Central Idaho from Lemhi county north and west to the Seven Devils Mountains" (Davis, 1934, p. 221). In Canada from Newgate\* on Kootenay River near Montana-British Columbia International Boundary, 10 specimens; Waterton Lakes National Park\*, 25 specimens; Crowsnest Pass\*, 3 specimens from British Columbia side and 7 from Alberta side of boundary; intergrading with northern form in Banff National Park\*, 8 specimens. (Alta., B.C.)

**†\*Zapus princeps kootenayensis** Anderson. KOOTENAY JUMPING MOUSE. *Souris sauteuse de Kootenay.*

1932. *Zapus princeps kootenayensis* Anderson, Nat. Mus., Canada, Ann. Rept. 1931, pp. 108-110.

*Type Locality.* Near summit of Green mountain, head of Murphy creek, about 10 miles north of Roosland, West Kootenay district, British Columbia, at about 6,000 feet altitude; latitude 49° 13' N., longitude 117° 52' W. (Type: N.M.C., No. 10020.)

*Range.* Interior of southern British Columbia, from eastern summit of Cascade mountains\*, Similkameen\*, Okanagan\*, Kettle River\*, Columbia\*, Kootenay\*, and Moyie\* River Valleys as far east as Purcell range of Selkirks; found in more humid parts of the Transition and Canadian life zones. (B.C.)

**\*Zapus princeps minor** Preble. SASKATCHEWAN JUMPING MOUSE. *Souris sauteuse de la Saskatchewan.*

1899. *Zapus princeps minor* Preble, North Amer. Fauna, No. 15, p. 23 (Aug. 8, 1890).

*Type Locality.* Wingard, near Carlton House, Saskatchewan, Canada. (Type: U.S.N.M., No. 73673.)

*Range.* Plains of southern Saskatchewan and southern Alberta. (Alta., Sask.)

**\*Zapus princeps saltator** Allen. STIKINE JUMPING MOUSE. *Souris sauteuse de la Stikine.*

1899. *Zapus saltator* Allen, Bull. Amer. Mus. Nat. Hist., vol. 12, p. 3 (March 4, 1899).

*Type Locality.* Telegraph Creek, Stikine River, British Columbia, Canada. (Type: A.M.N.H., No. 14408.)

*Range.* From Bella Coola Inlet region (Hagensborg\*, Stuie\*, west branch of Mosher Creek, 5,000 feet, Caribou Mountain\*, 4,700 feet, Mount Brilliant, 5,000 feet, Rainbow Mountains\*), north to mouth of Skeena River (Inverness), Telegraph Creek, and Atlin, and east to Wistaria\* near Burns Lake, and McDonald Creek\*, Mile 114 north on Alaska Highway north of Summit Pass, in northern British Columbia; the most northerly record being Rose River\*, Canol Road, Mile 95, southern Yukon, 2 specimens taken by A. L. Rand in 1944. (B.C., Y.T.)



\***Zapus trinotatus trinotatus** Rhoads. NORTHWEST COAST JUMPING MOUSE. *Souris sauteuse de la côte du Nord-ouest.*

1895. *Zapus trinotatus* Rhoads, Proc. Acad. Nat. Sci. Phila., 1894, p. 421 (Jan. 15, 1895).

1899. *Zapus imperator* Elliot, Field Columb. Mus., publ. 30, zool. ser., vol. 1, p. 228 (Feb. 1, 1899). Sieg's Ranch, Elwah River, Clallam county, Washington.

*Type Locality.* Lulu Island, mouth of Fraser River, British Columbia, Canada.

*Range.* Pacific coast region from Humboldt Bay, northwestern California, north in Oregon west of the Cascades, and in Washington including the Cascades; to southwestern British Columbia mostly at low levels (Aldergrove, Brackendale\* at head of Howe Sound, Chilliwack\*, Cultus Lake\*, Garibaldi Park, Mons, Point Gray), reaching 2,200 feet altitude at Alta Lake, and 4,500 feet in Lihumitson Park\* near the International Boundary. (B.C.)

### Genus *Napaeozapus* Preble<sup>1</sup>

1899. *Napaeozapus* Preble, North Amer. Fauna, No. 15, p. 33 (Aug. 8, 1899). Type, *Zapus insignis* Miller.

\***Napaeozapus insignis insignis** (Miller). EASTERN WOODLAND JUMPING MOUSE. *Souris sauteuse des bois de l'Est.*

1891. *Zapus insignis* Miller, Amer. Nat., vol. 25, p. 742 (Aug. 1891).

1899. *Napaeozapus insignis* Miller, Bull. New York State Museum, vol. 6, p. 330 (Nov. 18, 1899).

*Type Locality.* Restigouche River, New Brunswick, Canada. (Type: coll. of G. S. Miller, Jr., No. 1656/1452.)

*Range.* Eastern Canada, mostly in Canadian zone, from Nova Scotia (including Cape Breton Island\*), New Brunswick (Gloucester\*, Madawaska\*, and York counties), and Quebec south of St. Lawrence River (except Gaspé Peninsula); south in eastern states to Maryland. (N.B., N.S., P.Q.)

\***Napaeozapus insignis abietorum** (Preble). NORTHERN WOODLAND JUMPING MOUSE. *Souris sauteuse des bois du Nord.*

1899. *Zapus (Napaeozapus) insignis abietorum* Preble, North Amer. Fauna, No. 15, p. 36 (Aug. 8, 1899).

1900. *Napaeozapus insignis abietorum* Miller, Bull. New York State Museum, vol. 8, p. 114 (Nov. 21, 1900).

*Type Locality.* Peninsula Harbour, north shore of Lake Superior, Ontario, Canada. (Type: coll. of G. S. Miller, Jr., No. 4268.)

*Range.* Hudsonian zone from western Ontario (Nipigon, Peninsula Harbour, north of Lake Superior), Timagimi Forest Reserve\*, Abitibi, and presumably east through central Quebec north of range of *algonquinensis*. (Ont., P.Q.)

\***Napaeozapus insignis algonquinensis** Prince. ALGONQUIN WOODLAND JUMPING MOUSE.

1941. *Napaeozapus insignis algonquinensis* Prince, Occasional Papers of the Royal Ontario Museum of Zoology, No. 7.

*Type Locality.* Smoke Lake, Algonquin Park, Ontario. (Type: R.O.M.Z., No. 14370.)

*Range.* "Southern Ontario, east to Lake Edward, Champlain county, Quebec. From the southern limits of the range of the species in Ontario (north Peel county, north York county and central Ontario county) north to Bigwood, Sudbury District and Lake Nipissing, east at least as far as Lake Edward, Champlain county, Quebec." (Ont., P.Q.)

<sup>1</sup>Revised by Preble, North Amer. Fauna, No. 15, pp. 33-37 (Aug. 8, 1899).



\**Napaeozapus insignis frutectanus* Jackson. WISCONSIN WOODLAND JUMPING MOUSE. *Souris des bois du Wisconsin*.

1919. *Napaeozapus insignis frutectanus* Jackson, Proc. Biol. Soc. Wash., vol. 32, p. 9 (Feb. 14, 1919).

*Type Locality.* Crescent Lake, Oneida county, Wisconsin. (Type: U.S.N.M., No. 227349.)

*Range.* Northern Wisconsin, northern peninsula of Michigan, and in northern part of the southern peninsula; probably also northeastern Minnesota; in Canada common near southeast corner of Lake Superior (Pancake Bay\*, Batchawana Bay), one record from Rainy River in western Ontario, and 2 specimens examined from southeastern Manitoba collected by J. D. Soper near Caddy Lake in Whiteshell Forest Reserve, and at Cedar Lake near Vivian, Manitoba. (Man., Ont.)

†\**Napaeozapus insignis gaspensis* Anderson. GASPE WOODLAND JUMPING MOUSE. *Souris sauteuse des bois de Gaspé*.

1942. *Napaeozapus insignis gaspensis* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada for 1941, pp. 39-40 (English), pp. 53-54 (French) (July 14, 1942).

*Type Locality.* Near Federal Zinc and Lead mine, on upper waters of Berry Mountain Brook, a tributary of Grand Cascapedia River, Shickshock Mountains, about halfway between Gulf of St. Lawrence and Chaleur Bay, Gaspé county, Quebec; altitude about 1,500 feet. (Type: N.M.C., No. 4786.)

*Range.* Gaspé Peninsula, Quebec, Canada. (P.Q.)

†\**Napaeozapus insignis saguenayensis* Anderson. SAGUENAY WOODLAND JUMPING MOUSE. *Souris sauteuse des bois du Saguenay*.

1942. *Napaeozapus insignis saguenayensis* Anderson, Ann. Rept. Provancher Soc. Nat. Hist. Canada, Quebec, for 1941, pp. 40-42 (English), pp. 54-56 (French) (July 14, 1942).

*Type Locality.* Trout Lake, near Moisie Bay, north shore of Gulf of St. Lawrence, Saguenay county, Quebec, Canada. (Type: N.M.C., No. 9318.)

*Range.* North shore of Gulf of St. Lawrence\* from Godbout east to Strait of Belle Isle in Saguenay county, Quebec, and Labrador coast region north to Hamilton Inlet, Labrador. (Labr., P.Q.)

### Superfamily HYSTRICOIDAE

#### Family ERETHIZONTIDAE. American Porcupines

##### Genus *Erethizon* F. Cuvier<sup>1</sup>

1822. *E[rethizon]* F. Cuvier, Mem. Mus. Hist. Nat., Paris, vol. 9, p. 432. Type, *Hystrix dorsata* Linnaeus.

\**Erethizon dorsatum dorsatum* (Linnaeus). EASTERN CANADA PORCUPINE. *Porc-épic du Canada*.

1758. [*Hystrix*] *dorsata* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 57.

1822. *E[rethizon]* *dorsatum* F. Cuvier, Mem. Mus. Hist. Nat., Paris, vol. 9, p. 432.

1885. *Erethizon dorsatus dorsatus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 600 (1885).

1912. *Erethizon dorsatum dorsatum* Miller, List North Amer. Land Mamm. (1911), U.S. Nat. Mus., Bull. 79, p. 289 (Dec. 31, 1912).

*Type Locality.* Eastern Canada. (Type specimen not designated.)

*Range.* Northeastern United States and Eastern Canada, from Nova Scotia and Gaspé to Manitoba and northern Saskatchewan; animals intergrading with *myops* in colour in southern Yukon, and in skull characters in Wood Buffalo Park, northern Alberta. (Alta., Man., N.B., N.S., N.W.T., Ont., P.Q., Sask., Y.T.)

<sup>1</sup>Revised by Anderson, R. M., and Rand, A. L., Variation in the Porcupine (Genus *Erethizon*) in Canada, Canada Journ. Research, D. 21, pp. 292-309 (Sept., 1943); 1 map, 7 figs. (Sept. 6, 1943).



\***Erethizon dorsatum bruneri** Swenk. NEBRASKA YELLOW-HAIRED PORCUPINE. *Porc-épic du Nebraska*.

1916. *Erethizon epixanthum bruneri* Swenk, Univ. Studies, Lincoln, Nebr., vol. 16, p. 117 (Nov. 21, 1916).

*Type Locality*. Three miles east of Mitchell, Scottsbluff county, Nebraska. (Type: coll. of State Entom., Univ. Nebr., No. 305.)

*Range*. "Found in forested areas in Nebraska; limits of range unknown but recorded from Wyoming, Montana, and Kansas." (Anthony, 1928, p. 467.) Two specimens in the National Museum of Canada from Lonesome Butte\*, Saskatchewan, near the Montana boundary about 200 miles east of Cypress Hills, tentatively referred to *epixanthum* (Anderson and Rand, 1943, pp. 307-308), show some of the characters attributed to *dorsatum* and *bruneri*, and additional material from southern Saskatchewan indicates that *bruneri*, at least as an intergrade, is recognizable as a Canadian form. Specimens from southwestern Manitoba are particularly desirable. (Alta., Sask.)

\***Erethizon dorsatum epixanthum** Brandt. CALIFORNIA PORCUPINE. *Porc-épic de la Californie*.

1835. *Erethizon epixanthum* Brandt, Mem. Acad. Sci. St. Petersburg, ser. 6, vol. 3 (Sci. Nat., vol. 1), p. 390.

1885. *Erethizon dorsatum epixanthus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 600 (1885).

1912. *Erethizon epixanthum epixanthum* Miller, List North Amer. Land Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 289 (Dec. 31, 1912).

1943. *Erethizon dorsatum epixanthum* Anderson and Rand, Can. Journ. Research, D, 21, Sept. 1943, pp. 293, 307 (Sept. 24, 1943).

*Type Locality*. California. (See Hollister, Canadian Alpine Journal special number, p. 27 (Feb. 17, 1913).) (Type specimen not known.)

*Range*. From western United States northwest at least into the Cypress Hills\* area of southeastern Alberta and southwestern Saskatchewan, Canada, as an intergrade with *E. d. bruneri*. (Alta., Sask.)

\***Erethizon dorsatum myops** Merriam. ALASKA PORCUPINE. *Porc-épic d'Alaska*.

1900. *Erethizon epixanthus myops* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 27 (March 14, 1900).

1912. *Erethizon epixanthum myops* Miller, List North Amer. Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 290 (Dec. 31, 1912).

1943. *Erethizon dorsatum myops* Anderson and Rand, Can. Journ. Research, D, 21, Sept. 1943, p. 307 (Sept. 24, 1943).

*Type Locality*. Portage Bay, Alaska Peninsula, Alaska. (Type: U.S.N.M., No. 56140.)

*Range*. Wooded parts of Alaska southeast through Yukon to northern Alberta. Specimens from northern Alberta (Wood Buffalo Park\*), and from southern Yukon (Canol Road, Pelly River, Mile 95\*; Lapie River, Mile 132\*; and Teslin Lake\*) appear to show intergradation with *E. d. dorsatum*, and presumably the porcupines occurring in extreme northern British Columbia and southwestern Mackenzie district, Northwest Territories, have the same status. (Alta.\*, B.C.?, N.W.T.?, Y.T.\*)

\***Erethizon dorsatum nigrescens** Allen. DUSKY PORCUPINE. *Porc-épic sombre*.

1903. *Erethizon epixanthus nigrescens* Allen, Bull. Amer. Mus., Nat. Hist., vol. 19, p. 558 (Oct. 10, 1903).

1943. *Erethizon dorsatum nigrescens* Anderson and Rand, Can. Journ. Research, D, 21, Sept. 1943, p. 304 (Sept. 24, 1943).

*Type Locality*. Shesley River, British Columbia, Canada. (Type: A.M.N.H., No. 20772.)

*Range*. British Columbia from Telegraph Creek south in coast mountains to New Westminster district (Alta Lake), in interior to Chilcotin\*, Okanagan\*, Rossland\* (near Washington boundary), Yahk\* (near Idaho-Montana corner); and in Rocky Mountains of southwestern Alberta (Jasper\* and Waterton Lakes\*). (Alta., B.C.)



**\**Erethizon dorsatum picinum* Bangs.** LABRADOR PORCUPINE. *Porc-épic du Labrador.*

1900. *Erethizon dorsatus picinus* Bangs, Proc. New England Zool. Club, vol. 2, p. 37 (Sept. 20, 1900).  
 1912. *Erethizon dorsatum picinum* Miller, List North Amer. Land Mamm. (1911), U.S. Nat. Mus., Bull. 79, p. 289 (Dec. 31, 1912).

*Type Locality.* L'Anse au Loup, Strait of Belle Isle, Labrador, Canada. (Type: M.C.Z., coll. of E. A. and O. Bangs, No. 8839.)

*Range.* Common and generally distributed in Labrador and northeastern Quebec, from the Gulf of St. Lawrence north to the semi-barrens, west to Chimo, but otherwise its western limits are unknown, though porcupines undoubtedly occur here and there over Ungava Peninsula south of the northern limit of trees. (P.Q., Labr.)

Order **Artiodactyla.** Even-toed Ungulates. Hoofed Animals

Family **CERVIDAE.** Deer

Subfamily **Cervinae**

Genus *Cervus* Linnaeus. Wapiti

1758. *Cervus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 66. Type, *Cervus elaphus* Linnaeus.

**\**Cervus canadensis canadensis* (Erxleben).** EASTERN AMERICAN ELK. WAPITI. *Cerf du Canada.*

1777. [*Cervus elaphus*] *canadensis* Erxleben, Syst. Regni Anim., vol. 1, p. 305.  
 1783. *Cervus canadensis* Schreber, Säugthiere, vol. 5, pl. 246a.  
 1785. *Cervus canadensis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).

*Type Locality.* Eastern Canada. (Type specimen not designated.)

*Range.* In the early days of settlement elk were found from the Atlantic to the Pacific Oceans, living in forests, plains, and mountains, but the wild native elk of eastern Canada and eastern United States have been extinct for nearly 75 years and it is impossible to determine the western range of the eastern form. It formerly occurred in the Allegheny Mountain system from northern Georgia and Alabama north to southern Quebec, and in Ontario north to the Ottawa Valley. Seton (1929, Lives of Game Animals, vol. 3, p. 16) states the last elk in the eastern states was killed in Pennsylvania in November 1867. According to Lett (1884, Trans. Ottawa Nat. Field Club, No. 5, pp. 101-117) elk were present in considerable numbers in Carleton county, Ontario, in which Ottawa is situated, and Saunders (1932, Notes on the Mammals of Ontario, Trans. Royal Canadian Institute, vol. 18, p. 306) considers that the elk became extinct in Ontario probably about 1850. The only relict in the National Museum of Canada is one 6-point antler ploughed up in a swamp near Sydenham\*, Frontenac county, Ontario, 1888, presented by John Routledge. (Ont., P.Q.)

**\**Cervus canadensis manitobensis* Millais.** MANITOBA ELK. *Cerf du Manitoba.*

1915. *C[ervus] c[anadensis] manitobensis* Millais, The Gun at Home and Abroad, vol. 4, The Big Game of Asia and North America, p. 281.

*Type Locality.* "Manitoba and Eastern Saskatchewan," Canada.

*Range.* Southwestern Manitoba, mostly in the Riding Mountain region, and central Saskatchewan\*, mostly in the park land at northern edge of the Great Plains region; possibly occurred in the Plains region of central Alberta in earlier times. Somewhat smaller, darker, and more brownish, and with shorter antlers than the light greyish brown *C. c. nelsoni* of the Rocky Mountains region. (Man., Sask.)



\****Cervus canadensis nelsoni*** Bailey. ROCKY MOUNTAIN ELK. *Cerf des Rocheuses*.

1935. *Cervus canadensis nelsoni* Bailey, Proc. Biol. Soc. Wash., vol. 48, pp. 187-189 (Nov. 15, 1935).

*Type Locality.* Yellowstone National Park, Wyoming. (Type: U.S.N.M., No. 49722/124656.)

*Range.* Rocky Mountains, from northern New Mexico to northwestern Alberta\* and northeastern British Columbia (Prairie River\*). (Alta., B.C.)

### Genus *Odocoileus* Rafinesque

1832. *Odocoileus* Rafinesque, Atlantic Journ., vol. 1, p. 109. Autumn of 1832. Type, *Odocoileus speleus* Rafinesque=*Cervus virginianus* Boddaert, or a closely related subfossil form.

For use of this name in place of *Cariacus* Lesson (Nouv. tabl. regne animal, p. 173, 1842) and *Dorcelaphus* Gloger (Gemeinn. Hand.-u. Hilfsb. der Naturgesch., p. 140, 1841) See Merriam, Proc. Biol. Soc. Wash., vol. 12, pp. 99-100 (April 30, 1898); Cowan, Distribution and Variation in Deer (Genus *Odocoileus*) of the Pacific Coastal Region of North America, Contrib. Univ. Calif. Mus. Vert. Zool., Calif. Fish and Game, vol. 22, No. 3, pp. 155-246, figs. 51-63 (July 1936); and Goldman and Kellogg, Ten New White-tailed Deer from North and Middle America, Proc. Biol. Soc. Wash., vol. 53, pp. 81-90 (June 28, 1940).

### Subgenus *Eucervus* Gray. Black-tailed Deer

1866. *Eucervus* Gray, Ann. and Mag. Nat. Hist., ser. 3, vol. 18, p. 338 (Oct. 1866). Type, *Cervus macrotis* Say=*Cervus hemionus* Rafinesque.

\****Odocoileus hemionus hemionus*** (Rafinesque). ROCKY MOUNTAIN MULE DEER. *Chevreuil-mulet des Rocheuses*.

1817. *Cervus hemionus* Rafinesque, American Monthly Magazine, vol. 1, p. 436 (Oct. 1817).

1823. *Cervus macrotis* Say, Long's Exped. to the Rocky Mts., vol. 2, p. 88. Mora River, near the present town of Mora, New Mexico.

1885. *Cariacus macrotis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 692 (1885).

1898. *Odocoileus hemionus* Merriam, Proc. Biol. Soc. Wash., vol. 12, p. 100 (April 30, 1898).

1899. *Cariacus virgultus* Hallock, Forest and Stream, vol. 52, p. 404 (May 27, 1899). Near Hallock, Kittson county, Minnesota. (See V. Bailey, 1926, Mammals of North Dakota, North Amer. Fauna, No. 49, p. 41.)

1912. *Odocoileus hemionus hemionus* Miller, List North Amer. Land Mamm., 1911, U.S. Nat. Mus., Bull. 79, p. 388 (Dec. 31, 1912).

*Type Locality.* Sioux River, South Dakota. Type: none designated; described from the journals of Charles Le Raye, Boston, 1912; now extinct at type locality and no specimens known from elsewhere in the extreme eastern part of its former range (Cowan, 1936, p. 205).

*Range.* Great Plains, the Rocky Mountains, and the Great Basin, west to the summit of the Cascade-Sierra Nevada mountain chain; from western Nevada and New Mexico north to west end of Great Slave Lake and Simpson in Mackenzie district, Northwest Territories, and Liard River Valley in extreme northern British Columbia at least to Lower Liard Crossing; east in Canada to western Manitoba. Extending range and increasing in numbers in the northwest. (Alta., B.C., Man., N.W.T., Sask.)

\****Odocoileus hemionus columbianus*** (Richardson). COLUMBIAN BLACK-TAILED DEER. COAST DEER. *Cerf à queue noire*.

1829. *Cervus macrotis* var. *columbiana* Richardson, Fauna Boreali-Americana, vol. 1, p. 257.

1885. *Cariacus columbianus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).

1898. *Odocoileus columbianus* Merriam, Proc. Biol. Soc. Wash., vol. 12, p. 100 (April 30, 1898).

1936. *Odocoileus hemionus columbianus* Cowan, Calif. Fish and Game, vol. 22, No. 3, p. 215 (July 1936).

*Type Locality.* "Type not preserved; taken November 19, 1805, at Cape Disappointment, Pacific county, Washington; collected by hunters for the Lewis and Clark expedition" (Cowan, 1936, p. 216).



*Range.* "The coast and most of the coastal islands of western North America, from central British Columbia south to central California; eastward roughly to the summit of the Cascade-Sierra Nevada mountain chain." (Cowan, 1936, p. 216.) (B.C.)

***Odocoileus hemionus sitkensis* Merriam.** SITKA DEER. *Cerf à queue noire du Sitka.*

1898. *Odocoileus columbianus sitkensis* Merriam, Proc. Biol. Soc. Wash., vol. 12, p. 100 (April 30, 1898).  
1936. *Odocoileus hemionus sitkensis* Cowan, California Fish and Game, vol. 22, No. 3, p. 224 (July 1936).

*Type Locality.* Sitka, Alaska. (Type: U.S.N.M., No. 74383.)

*Range.* "Coast and coastal islands of southeastern Alaska; from Dall Island north to Indian Island, Icy Straits, and on the mainland from Port Simpson, British Columbia, north to Juneau, Alaska, and casually as far north as Atlin, British Columbia; southern limits of range unknown" (Cowan, 1936, p. 224). C. H. D. Clarke reported in 1944 that coast deer, which are presumably of this form, have been reported recently in the Teslin and Little Atlin sections of southern Yukon, as far north as Nisutlin River, supposedly entering through the Taku-Teslin Pass in the Coast Range. (B.C., Y.T.)

#### Subgenus *Odocoileus* Rafinesque. White-tailed Deer

**\**Odocoileus virginianus borealis* (Miller).** NORTHERN WHITE-TAILED DEER. *Chevreuil à queue blanche.*

1900. *Odocoileus americanus borealis* Miller, Bull. N.Y. State Museum, vol. 8, p. 83 (Nov. 21, 1900).  
1905. [*Odocoileus virginianus*] *borealis* Trouessart, Catal. Mamm. viv. foss., suppl., p. 704.

*Type Locality.* Bucksport, Hancock county, Maine.

*Range.* Nearly all sections of eastern Canada from Nova Scotia, New Brunswick, and Gaspé Peninsula and the north side of the St. Lawrence west to eastern Manitoba; formerly absent from Nova Scotia, but now found in all parts of that province including Cape Breton Island; spreading northward from southern Quebec and eastern Manitoba nearly to James Bay, particularly in cut-over and burned forest lands. (Man., N.B.\*, N.S., Ont.\*, P.Q.\*)

**\**Odocoileus virginianus dacotensis* Goldman and Kellogg.** NORTHERN PLAINS WHITE-TAILED DEER. DAKOTA WHITE-TAILED DEER. *Cerf à queue blanche des prairies du nord.*

1940. *Odocoileus virginianus dacotensis* Goldman and Kellogg, Proc. Biol. Soc. Wash., vol. 53, pp. 82-83 (June 28, 1940).  
1817. *Cervus* (misspelled *Corvus*) *macrourus* Rafinesque, American Monthly Magazine, vol. 1, p. 436 (Oct. 1817). (= *Odocoileus virginianus macrourus* (Rafinesque).) (In part.) Plains of Kansas River, Upper Mississippi Valley. Probably does not occur north of Missouri River drainage.

*Type Locality.* White Earth River, Mountrail county, North Dakota. (Type: U.S.N.M., No. 2879/1837.)

*Range.* Southwestern Manitoba (Riding Mountain National Park\*, Treesbank\*), southern and central Saskatchewan, and southern Alberta, south to northern Montana and North Dakota. (Alta., Man., Sask.)

**\**Odocoileus virginianus ochrourus* Bailey.** NORTHWESTERN WHITE-TAILED DEER. YELLOW-TAIL DEER. *Chevreuil à queue blanche du Nord-ouest.*

1932. *Odocoileus virginianus ochrourus* Vernon Bailey, Proc. Biol. Soc. Wash., vol. 45, pp. 43-44 (April 2, 1932).

*Type Locality.* From Coolin, south end of Priest Lake, Idaho. (Type: U.S.N.M., No. 159353.)

*Range.* "Northeastern California and northwestern Nevada northward through Oregon and Washington east of the Cascade Mountains to about 52 degrees north in southeastern British Columbia." (Cowan, 1936, p. 197.)



Newgate\*, Osoyoos Lake\*, Yahk\*. White-tailed deer are known to occur casually in Waterton Lakes National Park, and regularly in small numbers in Banff National Park, with only one record from Jasper National Park, but in the absence of specimens it is impossible to state whether they are referable to *ochrourus* or *dacotensis*. (B.C.)

### Genus *Alces* Gray. Moose

1821. *Alces* Gray, London Med. Repos., vol. 15, p. 307 (April 1, 1821). Type, *Cervus alces* Linnaeus.  
 1902. *Paralces* Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, p. 160 (July 1, 1902). (Substitute for *Alces* proposed on the assumption that this is a homonym of *Alce* Blumenbach, 1799.)

\**Alces americana americana* (Clinton). EASTERN MOOSE. *Élan d'Amérique*. *Original*.

1822. *Cervus americanus* (Clinton), Letters on Nat. Hist. and Int. Resources of New York, p. 193.  
 1835. *Alces americanus* Jardine, Nat. Library, vol. 21 (Mammalia; deer, antelopes, camels, etc.), p. 125.  
 1885. *Alces machlis* True, U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).  
 1891. *Alce americanus* Merriam, North Amer. Fauna, No. 5, p. 79 (July 30, 1891).  
 1907. *Alces columbae* Lydekker, The Field, London, vol. 109, p. 182 (Feb. 2, 1907). In original description said to be somewhere in British Columbia; in Zool. Record for 1907 (vol. 44, Mamm., p. 69), entered as Ontario (not British Columbia).

*Type Locality*. "Country north of Whitestown" (probably in the western Adirondack region), New York. (Type specimen not known.)

*Range*. Found normally in most wooded parts of Canada, where settlement is not too dense, in all provinces except Prince Edward Island; north to limit of trees, and west to northeastern British Columbia and Mackenzie district, Northwest Territories. (Alta.\*, B.C., Man.\*, N.B.\*, N.S., N.W.T., Ont.\*, P.Q.\*, Sask.)

\**Alces americana gigas* Miller. ALASKA MOOSE. *Original du Nord-ouest*.

1899. *Alces gigas* Miller, Proc. Biol. Soc. Wash., vol. 13, p. 57 (May 29, 1899).

*Type Locality*. North side of Tustumena Lake, Kenai Peninsula, Alaska. (Type: U.S.N.M., No. 86166.)

*Range*. Wooded parts of Alaska, Yukon\*, and northern British Columbia\*. (B.C., Y.T.)

*Alces americana shirasi* Nelson. YELLOWSTONE MOOSE. *Original de la Yellowstone*.

1914. *Alces americanus shirasi* Nelson, Proc. Biol. Soc. Wash., vol. 27, p. 12 (April 25, 1914).

*Type Locality*. Snake River, Lincoln county, Wyoming. (Type: U.S.N.M., No. 202973.)

*Range*. Western Wyoming, eastern and northern Idaho, and western Montana, northward into southeastern British Columbia. (B.C.)

### Genus *Rangifer* Hamilton Smith. Reindeer, Caribou<sup>1</sup>

1827. *Rangifer* Hamilton Smith, Griffith's Cuvier, Animal Kingdom, vol. 5, p. 304. Type, *Cervus tarandus* Linnaeus.  
 1827. *Tarandus* Billberg, Synopsis Faunae Scandinaviae, p. 22. Same type.

<sup>1</sup>Revised by Jacobi, Arnold, Das Rentier, eine zoologische Monographie der Gattung Rangifer, Zool. Anz., Ergänzungsband zu Band 96, pp. 264, figs. 32, Pls. 6, Leipzig (1931). See also Murie, Olaus J., Alaska-Yukon Caribou, North Amer. Fauna, No. 54, pp. 93, figs. 16, Pls. 9, U.S. Dept. Agriculture, Bur. Biol. Surv., Wash. (June 1935); and Anderson, R. M., The Present Status and Distribution of the Big Game Mammals of Canada, Trans. 3rd North Amer. Wildlife Conference, pp. 390-406, 11 distribution maps (1938).



## arcticus group

\***Rangifer arcticus arcticus** (Richardson). BARREN GROUND CARIBOU. *Renne arctique*.

1829. *Cervus tarandus* var. *arctica* Richardson, Fauna Boreali-Americana, vol. 1, p. 241.  
 1885. *Rangifer tarandus* and *R. tarandus groenlandicus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).  
 1896. *Rangifer arcticus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 8, p. 234 (Nov. 21, 1896).  
 1924. *Rangifer arcticus arcticus* Miller, List North Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 128 (Dec. 31, 1924).

*Type Locality.* Fort Enterprise, Mackenzie district, Northwest Territories, Canada; latitude about 64° 30' N., longitude 113° W. (See Allen, Bull. Amer. Mus. Nat. Hist., vol. 24, p. 584 (Sept. 11, 1908).) One near topotype, male adult, skull, in N.M.C., No. 5227, taken near southwest corner of Aylmer Lake by G. H. Blanchet Aug. 28, 1924.

*Range.* Mainly in unforested parts of Mackenzie and Keewatin districts of Northwest Territories, from west side of Hudson Bay and Melville Peninsula, west to lower Mackenzie Valley, and north to southern fringe of islands north of the mainland Arctic coast in this region. Some individuals and small herds remain in the northern part of the range at all seasons, but there is a general but irregular migration southward in autumn, reaching as far south as Churchill River or beyond in northern Manitoba, Reindeer Lake on the Manitoba-Saskatchewan boundary, Athabaska Lake, and occasionally straggling into the Wood Buffalo Park in northeastern Alberta. (Alta., Man., N.W.T.\*, Sask.)

**Rangifer arcticus dawsoni** Seton.<sup>1</sup> QUEEN CHARLOTTE ISLAND CARIBOU. *Caribou de la reine Charlotte*.

1900. *Rangifer dawsoni* Seton-Thompson, Ottawa Naturalist, vol. 13, p. 260 (Feb. 1900).  
 1912. *Rangifer dawsoni* Merriam, Appendix C, in Charles Sheldon's book, The Wilderness of the North Pacific Coast Islands, Chas. Scribner's Sons, New York, pp. 233-236. Descriptions based on the type and 4 other specimens, 1 skin with skull, 1 with skull only, taken on Virago Sound, Nov. 13, 1908, and 1 shed antler picked up in same area in 1906. A very small race of caribou.  
 1931. *Rangifer arcticus dawsoni* Jacobi, Das Rentier, Leipzig, p. 95 (1931).

*Type Locality.* Graham Island, Queen Charlotte Islands, British Columbia, Canada. Upland meadow on west slope of island. (Type: B.C. Prov. Mus., No. 1483; described from fragmentary skull with one antler of animal killed in 1882.)

*Range.* Known only from Graham Island, the northernmost and largest island of the Queen Charlotte group. Long considered to be extinct, but Cowan (1936, Can. Field-Nat., vol. 50, No. 9, p. 147 (Dec. 3, 1936)) was told in 1935 by the collector of three of the Virago Sound specimens that he had within the year seen fresh caribou tracks, and is confident that the animal is still to be found on the island plateaus of northern Graham Island. (B.C.)

‡\***Rangifer arcticus fortidens** Hollister. ROCKY MOUNTAIN CARIBOU. *Caribou des Rocheuses*.

1912. *Rangifer fortidens* Hollister, Smiths. Misc. Coll., vol. 56, No. 35, p. 3 (Feb. 7, 1912).  
 1931. *Rangifer arcticus fortidens* Jacobi, Das Rentier, Ergänzungsband zum Zool., 96:94 (Nov. 1931).  
 1942. *Rangifer arcticus fortidens* Poole and Schantz, Cat. (Type: specimen U.S.N.M., Bull. No. 178, p. 24.)

*Type Locality.* Head of Moose Pass branch of Smoky River, Alberta, Canada. (Type: U.S.N.M., No. 174505.)

*Range.* Northern Rocky Mountains from about the extreme northern part of Banff National Park, Mount Robson region in British Columbia, and parts of Jasper National Park (Mount Edith Cavell\* and Tongue Creek\*); limits of range not determined, nor its relationship to *R. a. osborni* to the northwest, *R. montanus* on the west, and *R. c. sylvestris* to the northeast. (Alta., B.C.)

<sup>1</sup>Named in honour of Dr. G. M. Dawson, who first reported the occurrence of caribou on the Queen Charlotte Islands.



†\***Rangifer arcticus montanus** Seton. SELKIRK CARIBOU. MOUNTAIN CARIBOU. *Caribou des Selkirks*.

1899. *Rangifer montanus* Seton-Thompson, Ottawa Naturalist, vol. 13, No. 5, pp. 129-130 (Aug. 1899).

1931. *Rangifer arcticus montanus* Jacobi, Das Rentier, eine Zoologische Monographie der Gattung Rangifer, Leipzig, p. 92 (1931).

*Type Locality.* Illecillewaet watershed, near Revelstoke, Selkirk Range, British Columbia, Canada. (Type: N.M.C., No. 232.)

*Range.* Interior mountain ranges of southern and central British Columbia; originally in most of the Selkirks and in suitable places in drainage of upper Fraser, North Thompson, and Chilcotin Rivers, and in Gold Range; stated by Taylor and Shaw (1929, Prov. List Land Mamm. Wash., p. 30) to have been of occasional occurrence in northeastern Washington, south to Usk and west to Okanogan county; a few were known to occur in northern Idaho as late as 1929, but the species is now considered to be extinct in Idaho (Davis, Mamm. Idaho, 1939, p. 372). The writer talked with local residents in 1929 who assured him that a small number of caribou were still on Summit Creek on the British Columbia-Idaho boundary, and that there were still a few in the Nelson Range west of Kootenay Lake and Moyie Range east of Kootenay Lake.

John F. and Theodora C. Stanwell-Fletcher (1943, Some Accounts of the Flora and Fauna of the Driftwood Valley Region of North Central British Columbia, Occasional Papers of the B.C. Prov. Mus., No. 4, p. 95 (May 1943)) collected two specimens in this region between the headwaters of Peace and Skeena Rivers (1 adult male with skin and skull (B.C.P.M., No. 4549) and 1 female with skull only (B.C.P.M., No. 4550)). The mammals were identified by Ian McTaggart Cowan, at that time Assistant Director of the Provincial Museum, Victoria, B.C., and the statement is made that "These appear to be exactly intermediate between *osborni* and *montanus* and are very similar to the type of animal found down the western mountain chain as far south as the Chilcotin plateau." The similarity between *montanus* and *osborni* has often been noted and the above comments add weight to the placing of *montanus* as a subspecies of *Rangifer arcticus* by Jacobi (1931, op. cit., p. 92). (B.C.)

\***Rangifer arcticus osborni** Allen. OSBORN CARIBOU. *Caribou d'Osborn*.

1902. *Rangifer osborni* Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, p. 149 (April 16, 1902).

1935. *Rangifer arcticus osborni* Murie, North Amer. Fauna, No. 54, p. 81 (June 1935).

*Type Locality.* Cassiar Mountains, British Columbia, Canada. (Type: A.M.N.H., No. 15714.)

*Range.* Northern British Columbia and parts of southern Yukon (Teslin Lake\*, north to Wolf River\*, the headwaters of Pelly\* and Macmillan Rivers), Canada; intergrading with *R. a. stonei* in parts of southern Yukon. (B.C., Y.T.)

\***Rangifer arcticus stonei** Allen. STONE CARIBOU. *Caribou de Stone*.

1901. *Rangifer stonei* Allen, Bull. Amer. Mus. Nat. Hist., vol. 14, p. 143 (May 28, 1901).

1912. *Rangifer excelsifrons* Hollister, Smiths. Misc. Coll., 56 (35), 5 (Feb. 7, 1912). Meade River, near Point Barrow, Alaska. (Type: U.S.N.M., No. 16755.)

1915. *Tarandus rangifer ogilvyensis* Millais, The Gun at Home and Abroad, vol. 4, p. 263 Ogilvy Mountains, north of Dawson, Yukon, Canada.

1919. *Rangifer mcguirei* Figgins, Colo. Mus. Nat. Hist. Proc. 3 (1), 1 (Dec. 28, 1919). Type locality, Kletson Creek, a tributary of White River, Yukon, Canada. Type: Colo. Mus. Nat. Hist., No. 1846.

1935. *Rangifer arcticus stonei* Murie, North Amer. Fauna, No. 54, 76 (June 1935).

*Type Locality.* Kenai Peninsula, Alaska. (Type: A.M.N.H., No. 16701.)

*Range.* "Most of central and northern Alaska, excluding Alaska Peninsula and Unimak Island; also in western Yukon, Canada, more sparingly to the eastward; the form is absent from most of the coastal belt of Alaska, having been exterminated on Kenai Peninsula and is scarce in western and parts of



northern Alaska."—Murie, 1935, p. 76. The caribou found in the small strip of Northwest Territories west of Mackenzie River delta\* are also referable to this form. (N.W.T., Y.T.)

**Rangifer caboti** G. M. Allen.<sup>1</sup> UNGAVA CARIBOU. *Renne d'Ungava*.

1914. *Rangifer arcticus caboti* G. M. Allen, Proc. New England Zool. Club, vol. 4, p. 104 (March 24, 1914).  
 1915. *Tarandus rangifer labradorensis* Millais, The Gun at Home and Abroad, vol. 4, p. 259. (".....horns brought into Nain, Davis Inlet, and Fort Chimo.")  
 1931. *Rangifer caboti* Jacobi, Das Rentier, Leipzig, p. 108 (1931). Placed by Jacobi in the *arcticus* group, but along with *R. pearyi* ranked as distinct species more closely related to the various forms of reindeer of the Ice Age, listed as *Rangifer arcticus (fossilis)*.

*Type Locality.* Thirty miles north of Nachvak, eastern Labrador. (Type: M.C.Z., No. 15372.)

*Range.* Northern parts of Ungava Peninsula, from Hudson Strait southward in the unforested regions of Labrador for an undetermined distance, and on the eastern side of Hudson Bay in the province of Quebec about to Great Whale River. (Labr., P.Q.)

**\*Rangifer pearyi** Allen. PEARY'S CARIBOU. POLAR CARIBOU. *Caribou de Peary*.

1902. *Rangifer pearyi* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, p. 409 (Oct. 31, 1902).  
 1931. *Rangifer pearyi* Jacobi, Das Rentier, Leipzig, p. 111. Placed by Jacobi in the *arcticus* group along with *R. caboti* (*q.v.*, *ante*) as distinct species.

*Type Locality.* Ellesmere Island, latitude 79 degrees north, Franklin district, Northwest Territories, Canada. (Type: A.M.N.H., No. 19231.)

*Range.* Ellesmere Island (Craig Harbour\*, Fram Fiord\*), Sverdrup Islands (Hyperit Point, Axel Heiberg Island\*), and probably other islands in the northern part of the Canadian Arctic Archipelago, but specimens from some of the larger islands (Devon, Bathurst, Cornwallis, Melville, and Prince of Wales Islands) are needed for the determination of the range of this species or its relationship with other forms of caribou. The caribou of northwestern Greenland north of Kane Basin are perhaps referable to this form. (N.W.T., Franklin district.)

caribou group (woodland caribou)

**\*Rangifer caribou caribou** (Gmelin). EASTERN WOODLAND CARIBOU. *Renne. Caribou de l'Est*.

1788. [*Cervus tarandus*] *caribou* Gmelin, Syst. Nat., vol. 1, p. 177.  
 1854. *Rangifer caribou* Audubon and Bachman, Quadr. N. Amer., vol. 3, p. 111.  
 1885. *Rangifer tarandus caribou* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).  
 1912. *Rangifer caribou caribou* Miller, List North Amer. Land Mamm. (1911), U.S.N.M., Bull. 79, p. 392 (Dec. 31, 1912).

*Type Locality.* Eastern Canada.

*Range.* Formerly found in most parts of Nova Scotia but has been extinct in that province since about 1924 (1 head and 1 antler in National collection); possibly exists in very small numbers in northwestern New Brunswick; in Quebec found locally on Gaspé Peninsula (Mount Albert\*, 4,000 feet) and in some numbers in suitable areas north of Gulf of St. Lawrence and probably in southern Labrador; irregularly in wooded areas in western Quebec; in Ontario considered to have disappeared entirely from the east of a line drawn from east end of Lake Superior to James Bay; one small band on Shakespeare Island in Lake Superior, a few about Lake Nipigon, Lake of the Woods, and Rainy Lake area in western Ontario; local bands in small numbers north of the Canadian National Railway lines in northern Ontario. (N.B., Ont., P.Q., and formerly N.S.)

<sup>1</sup>Named in honour of William Brooks Cabot (1858-), author of *In Northern Labrador* (Boston, 1912), Labrador, pp. xiii, 351, illustr. London, 1920, and various notes on his many exploratory and hunting expeditions in Labrador, and donor of valuable collections to scientific institutions, including specimens of the caribou that bears his name.



**\*Rangifer caribou sylvestris** (Richardson). WESTERN WOODLAND CARIBOU. *Renne de l'Ouest*.

1829. *Cervus tarandus* var.  $\beta$  *sylvestris* Richardson, Fauna Boreali-Americana, vol. 1, p. 250.  
 1912. *Rangifer caribou sylvestris* Hollister, Smiths. Misc. Coll., vol. 56, No. 35, p. 4 (Feb. 7, 1912).  
 1915. *Tarandus rangifer keewatinensis* Millais, The Gun at Home and Abroad, vol. 4, p. 257. (Range: "Central and northern Manitoba, Keewatin, North and Saskatchewan and as far north as the Peace River and Lake Athabasca.")

*Type Locality.* Southwestern shores of Hudson Bay.

*Range.* In parts of northwestern Ontario, northern Manitoba, northern Saskatchewan, northern Alberta, and wooded parts of Mackenzie district as far north as Great Bear Lake and lower Mackenzie Valley. There is a probability that the caribou in parts of northeastern British Columbia (Peace River, etc.) are referable to this form, but the status of the woodland and southern mountain caribou have not been studied with adequate material, and exact limits of range are not determined. (Alta., Man., N.W.T., Ont., Sask.)

**Rangifer caribou terranova** Bangs. NEWFOUNDLAND CARIBOU. *Caribou de Terre-Neuve*.

1896. *Rangifer terranova* Bangs, Preliminary Description of the Newfoundland Caribou, p. 1 (Nov. 11, 1896).  
 1896. *Rangifer terranova* Allen, Bull. Amer. Mus. Nat. Hist., vol. 8, p. 233 (Nov. 21, 1896). Grand Lake, Newfoundland. (Type: A.M.N.H., No. 11775, adult male, mounted.)  
 1931. *Rangifer caribou terranova* Jacobi, Das Rentier, Leipzig, p. 122 (1931).

*Type Locality.* Codroy, Newfoundland. (Type: M.C.Z., No. B3778, Bangs coll.)

*Range.* Restricted to Newfoundland. (Nfld.)

#### *tarandus* group

**\*Rangifer tarandus groenlandicus** (Borowski). GREENLAND CARIBOU. *Renne du Groenland*.

1780. *Cervus groenlandicus* Borowski, Gemeinnützige Naturgeschichte des Thierreichs, vol. 1, pt. 3, p. 72.  
 1788. (*Cervus tarandus*) *groenlandicus* Gmelin, Syst. Nat., vol. 1, p. 177.  
 1857. *Rangifer groenlandicus* Baird, Mamm. North Amer., p. 634.  
 1896. *Rangifer groenlandicus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 8, p. 234 (Nov. 21, 1896).  
 1931. *Rangifer tarandus groenlandicus* Jacobi, Das Rentier, Leipzig, p. 69 (1931).

*Type Locality.* Greenland.

*Range.* West coast of Greenland as far north as the Melville glacier region northeast of Baffin Bay; formerly common, but now absent from many formerly occupied areas and greatly reduced in numbers elsewhere; on parts of northeast Greenland considered common until about 1894, but are now considered extinct in that region. The caribou of northwestern Greenland are said to be smaller and are perhaps the same as *Rangifer pearyi* of Ellesmere Island, the straits separating these areas being narrow and frozen over at intervals during several months of the year. (Greenland.)

#### Family ANTILOCAPRIDAE. Pronghorns

##### Genus *Antilocapra* Ord

1818. *Antilocapra* Ord, Journ. de physique, vol. 87, p. 149. Type, *Antilope americana* Ord.



**\*Antilocapra americana americana** (Ord). AMERICAN PRONGHORN ANTELOPE. *Cabri*.

1815. *Antelope americana* Ord, Guthrie's Geography, 2d Amer. ed., vol. 2, p. 292 (described on p. 308).  
 1818. *Antilocapra americana* Ord, Journ. de phys., vol. 87, p. 149.  
 1885. *Antilocapra americana* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).

*Type Locality*. "Plains and highlands of the Missouri." (Type specimen not known.)

*Range*. Great Plains area of western North America from Mexico north through sixteen states from southern California and Oregon east to western Texas, Oklahoma, Kansas, Nebraska, South Dakota, and western North Dakota; in Canada north of the Montana-International Boundary (49th parallel) from about 104 degrees west longitude in Saskatchewan to about 112 degrees west longitude in Alberta, ranging north a little beyond South Saskatchewan River in Saskatchewan and Red Deer River in Alberta. The antelope ranged east to southwestern Manitoba until about 1850, but its range and numbers were reduced until in 1924 the total number in Canada was estimated at about 1,400. Since that time judicious protection had brought the number back to about 30,000 in Alberta in 1944, and a lesser number in Saskatchewan, allowing open seasons for hunting for several years past. (Alta.\*, Sask.\*)

Family BOVIDAE

Genus *Bison* Hamilton Smith. American Buffaloes

1827. *Bison* Hamilton Smith, Griffith's Cuvier, Animal Kingdom, vol. 5, p. 373. Type, *Bos bison* Linnaeus.

**\*Bison bison bison** (Linnaeus). PLAINS BUFFALO. PLAINS BISON. *Bison d'Amérique*.

1758. [*Bos*] *bison* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 72.  
 1885. *Bison americanus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).  
 1888. *B[ison] bison* Jordan, Manual of the Vertebrate Animals of the Northern United States, ed. 5, p. 337.

*Type Locality*. Mexico. (See Thomas, Proc. Zool. Soc. London, 1911, p. 154 (March 1911).) (Type specimen not designated.)

*Range*. Formerly ranged from northeastern Mexico northward to southern Manitoba, and to northern edge of Great Plains region in Saskatchewan and Alberta; west to the plains of Columbia River to northeastern California, eastern Oregon, and Washington, occasionally straggling into extreme eastern British Columbia; eastern range not determined. The bison ranged nearly to the Atlantic seaboard at the time of the first settlements, from New York to northern Georgia, and the Eastern bison (*B. b. pennsylvanicus*) was soon exterminated, and fragmentary specimens and scanty data are insufficient to show where it merged with the western race. The Plains bison has been preserved in considerable numbers in enclosed preserves and parks, but does not exist in Canada in a wild state. (Alta., B.C., Man., Sask.)

**†\*Bison bison athabasca** Rhoads. WOOD BUFFALO. WOOD BISON. *Bison d'Athabaska*.

1898. *Bison bison athabasca* Rhoads, Proc. Acad. Nat. Sci. Phila. (1897), p. 498 (Jan. 18, 1898).

*Type Locality*. Within 50 miles southwest of Fort Resolution, Mackenzie district, Northwest Territories, Canada. (Type: N.M.C., No. 299, male adult, mounted; collected and presented by Warburton Pike in 1892.)

*Range*. Formerly ranged in northern Alberta, north to the northern side of Great Slave Lake, Mackenzie district, Northwest Territories, and southwest at least to Fort St. John region in northeastern British Columbia and to Liard River; possibly occurred in southeastern Yukon, but specimens have not yet been definitely separated from the fossil forms that are found in the Yukon. Now restricted to Wood Buffalo Park (an area of about 17,000 square miles on



both sides of the Alberta-Mackenzie district boundary, 60th parallel), but range to some extent outside southern boundary of the park south of the lower Peace River; considerable admixture, at least in southern part of the range, with *B. b. bison* of Great Plains stock, of which 6,673 animals were moved from the former Wainwright Park herd between 1925 and 1929. (Alta., B.C., N.W.T.)

Genus *Ovibos* Blainville.<sup>1</sup> Muskoxen

1816. *Ovibos* Blainville, Bull. Soc. Philom., p. 76. Type, *Bos moschatus* Zimmermann.

1911. *Bosovis* Kowarzik, Zool. Anzeiger, vol. 37, p. 107 (Feb. 14, 1911). Type, *Bos moschatus* Zimmermann.

**\**Ovibos moschatus moschatus* (Zimmermann).** BARREN GROUNDS MUSKOX. *Bœuf musqué*.

1780. *Bos moschatus* Zimmermann, Geogr. Geschichte, vol. 2, p. 86.

1822. *Ovibos moschatus* Desmarest, Mammalogie, vol. 2, p. 492.

1885. *Ovibos moschatus* True, U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).

1908. *O[ivibos] moschatus mackenzianus* Kowarzik, Zool. Anzeiger, vol. 33, p. 617 (Nov. 10, 1908). (Great Slave Lake, Mackenzie, Canada. See Kowarzik, Fauna Arctica, vol. 5, p. 89 (May 24, 1910).)

*Type Locality.* Between Seal and Churchill Rivers, Manitoba, Canada.

*Range.* Formerly generally distributed in suitable areas from west side of Hudson Bay (except in range of *O. m. niphoecus*) to Arctic coast and Arctic Alaska west to Point Barrow region, now restricted to a few small isolated bands from upper Thelon and upper Back Rivers, probably intergrading with *O. m. niphoecus* in some areas; scattered south of Bathurst Inlet, and a few in region north of Great Bear Lake. (Specimens, of mounted bull and mounted skeleton, from northeast of Fort Rae\*; Tree River\*.) (N.W.T., western Keewatin and eastern Mackenzie districts.)

**\**Ovibos moschatus niphoecus* Elliot.** HUDSON BAY MUSKOX. *Bœuf musqué de la baie d'Hudson*.

1905. *Obivos moschatus niphoecus* Elliot, Proc. Biol. Soc. Wash., vol. 18, p. 135 (April 18, 1905).

*Type Locality.* Head of Wager River, Northwest Territories, Canada. (Type: Chicago Mus. Nat. Hist., No. 1267, male. Stated by Allen (1913, p. 181) to be a dwarf specimen.)

*Range.* Undetermined. Muskoxen are not known to occur east of Repulse Bay and Allen (1912, op. cit., p. 190) states that they probably range north from Chesterfield Inlet, Baker Lake, and Dubawnt River to the Arctic coast of the mainland but apparently only specimens from Wager Inlet region were examined. This form is only tentatively listed here as a recognized subspecies. Both from the characters given by Allen (usually no coronal nor facial white areas in adult males.....horns more slender and longer in proportion to their basal breadth and generally light coloured) and as shown in six mounted specimens from Wager Inlet\* obtained by A. P. Low in February 1904, in N.M.C. collection, which have little whitish on head except in a calf, and with horns pale yellowish horn colour with black tips, they show apparent intergradation with *O. m. wardi*, connecting *wardi* with *moschatus*. (N.W.T., Keewatin district.)

<sup>1</sup>Revised by Allen, J. A., Ontogenetic and Other Variations in Muskoxen with a Systematic Review of the Muskox group, recent and extinct, Memoirs of Amer. Mus. Nat. Hist., n.s., vol. 1, pt. 4, pp. 103-226, figs. 45, pls. 17, quarto. (March 1913); including Notes on Muskoxen (Arctic Canada and Alaska) by R. M. Anderson, pp. 186-187. See also Russell, Frank, Explorations in the Far North, being the report of an expedition under the auspices of the University of Iowa during the years 1892, '93 and '94, publ. by the University, chap. 7, The musk-ox hunt, pp. 108-124, and pp. 232-236 (1898); Anderson, Arctic Game Notes, distribution of the large animals in the Far North, Amer. Mus. Journal, pp. 4-21, illustr. (Jan. 1913); Report on the Natural History Collections of the Expedition (1908-1912), pp. 436-527 (muskox, pp. 506-507), in My Life with the Eskimo (Stefansson, V.), New York (Nov. 1913); Notes on the Musk Oxen and the Caribou, in Appendix B, Conserving Canada's Musk Oxen, by Hoare, W. H. B., Dept. Interior, Ottawa (1930); Mammals of the Eastern Arctic and Hudson Bay, pp. 82-83, in Canada's Eastern Arctic, Dept. Interior, Ottawa, 1934; Mammals and Birds of the Western Arctic District, Northwest Territories, Canada, p. 7, in Canada's Western Northland, Dept. Mines and Resources, Ottawa, 1937; and Clarke, C. H. D., A Biological Investigation of the Thelon Game Sanctuary, Nat. Mus., Canada, Bull. No. 96, pp. 73-84 (1940)



**\*Ovibos moschatus wardi** Lydekker. WHITE-FRONTED MUSKOX. *Bœuf musqué à front blanc*.

1900. *Ovibos moschatus wardi* Lydekker, Nature, vol. 63, p. 157 (Dec. 13, 1900).

1908. *O[vibos] moschatus melvillensis* Kowarzik, Zool. Anzeiger, vol. 33, p. 617 (Nov. 10, 1908). Melville Island. See Kowarzik, Fauna Arctica, vol. 5, p. 90 (May 24, 1910).

*Type Locality.* East Greenland. Clavering Island.

*Range.* Coast of East Greenland from above 70° N., ranging north around North Greenland, and thence southward along the west coast to about 81° N. Formerly through the Canadian Arctic Archipelago from northern Ellesmere Island and Devon Island, south to Lancaster Sound, westward to Prince Patrick Island, Melville Island, Banks Island, and Victoria Island. Extinct on Banks Island since about the beginning of the present century and probably if not entirely exterminated on Victoria Island a few years later. Still found in some numbers from northern Ellesmere Island to Melville Island (N.M.C., Ellesmere Island, Grethasoer Bay\*; Devon Island, Cape Sparbo\*; Melville Island\*). (N.W.T., Franklin district.)

#### Genus *Ovis* Linnaeus. Sheep<sup>1</sup>

1758. *Ovis* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 70. Type, *Ovis aries* Linnaeus.

**\*Ovis canadensis canadensis** Shaw. ROCKY MOUNTAIN BIGHORN. CANADA BIGHORN. *Mouflon des Rocheuses*.

1804. *Ovis canadensis* Shaw, Naturalist's Miscell., vol. 15, text to pl. 610.

1885. *Ovis montana* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).

1891. *Ovis canadensis* Merriam, North Amer. Fauna, No. 5, p. 81 (July 30, 1891).

*Type Locality.* Mountains on Bow River, near Exshaw, Alberta, Canada. (See Preble, David Thompson's Narrative, p. lxxxi, 1916.) Type specimen not known to be extant.

*Range.* "In Canada confined to the Rocky Mountains in which it ranges north to the vicinity of Wapiti Pass some 120 miles south of the Peace River; south through western Montana, eastern Idaho, Wyoming, Utah and into Colorado." (Cowan, 1940, p. 533.)

C. H. D. Clarke (MSS. 1942) states; "From Simpson Pass (in Banff National Park) northward, the western limit of sheep lies east of the continental divide. South of Simpson Pass the western limit lies in British Columbia. The reason for this is that they cannot stand deep snow on their winter range. Some pasture areas must be more or less exposed in winter or there will be no sheep." (Alta., B.C.)

**\*Ovis canadensis californiana** Douglas. NORTHWESTERN BIGHORN. *Mouflon du Nord-ouest*.

1829. *Ovis californianus* Douglas, Zool. Journ., vol. 4, p. 332 (Jan. 1829).

1912. *Ovis cervina californiana* Allen, Bull. Amer. Mus. Nat. Hist., vol. 31, p. 25 (March 4, 1912).

1912. *Ovis canadensis californiana* Miller, North Amer. Land Mamm. 1911, p. 396 (Dec. 31, 1912).

1915. *Ovis canadensis similkameenensis* Millais, The Gun at Home and Abroad, vol. 4, p. 324. Similkameen Mountains, British Columbia.

*Type Locality.* Near Mount Adams, Yakima county, Washington. (See Allen, Bull. Amer. Mus. Nat. Hist., vol. 31, p. 25 (March 4, 1912).) (Type: In British Museum, No. 59.9.18.5; skull and horns of adult male taken August 27, 1826, near Mount Adams, Yakima county, Washington, by David Douglas.)

*Range.* "Formerly from the Chilcotin River, British Columbia, south through the Cascades of Washington and Oregon and the Sierra Nevada of California to the vicinity of Mount Whitney." (Cowan, 1940, p. 554.) Still found in small numbers in parts of the Lillooet district, at north end of Okanagan Lake, and in Ashnola Creek\* region of lower Similkameen Valley in southern British Columbia. (B.C.)

<sup>1</sup>Revised by Ian McTaggart Cowan, "Distribution and Variation in the Native Sheep of North America," The American Midland Naturalist, 24:3; pp. 505-580 (Nov. 1940).



**\*Ovis dalli dalli** (Nelson). WHITE SHEEP. DALL'S SHEEP. *Mouflon de Dall*.

1884. *Ovis montana dalli* Nelson, Proc. U.S. Nat. Mus., vol. 7, p. 13 (June 3, 1884).  
 1885. *Ovis montana dalli* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).  
 1897. *Ovis dalli* Allen, Bull. Amer. Mus. Nat. Hist., vol. 9, p. 112 (April 8, 1897).  
 1902. *Ovis dalli kenaiensis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 16, p. 140. Head of Sheep Creek, Kenai Peninsula, Alaska.

*Type Locality*. "Mountains south of Fort Yukon on west bank of Yukon River, Alaska, probably Tanana Hills, winter 1879-80, collected by L. N. McQueston." (Cowan, 1940, p. 525.) (Cotypes: U.S.N.M., No. 13266/20786 male adult; 13265/20787 female adult.)

*Range*. "Mountains of Alaska, Yukon Territory, Northwest Territories, west of the Mackenzie River, south in the main chain of the [Mackenzie Mountains] Rockies to the Nahanni River. In northern British Columbia and central Yukon intergrades broadly with *O. d. stonei*, but typical *dalli* is to be found in the St. Elias Range in northwestern British Columbia\* bordering on the boundary of the Alaska panhandle." (Cowan, 1940, p. 526.) Some specimens from Nahanni Mountains, N.W.T.\*, have blackish tails and dusky on legs, showing a faint intergradation with *O. d. stonei*. (B.C., N.W.T., Y.T.)

**\*Ovis dalli stonei** Allen. STONE'S SHEEP. BLACK SHEEP. *Mouflon de Stone*. *Mouflon noir*.

1897. *Ovis stonei* Allen, Bull., Amer. Mus. Nat. Hist., vol. 9, p. 111 (April 8, 1897).  
 1898. *Ovis canadensis liardensis* Lydekker, Wild Oxen, Sheep, and Goats of all Lands, p. 215. Liard River, British Columbia, Canada.  
 1901. *Ovis fannini* Hornaday, Fifth Ann. Rept. New York Zool. Soc., Appendix No. 1, p. 2 (Jan. 8, 1901). Dawson City, Yukon, Canada. (Placed as synonym of *O. d. stonei* Allen, by Cowan, 1940, p. 530.) A form intermediate with *O. d. dalli*, commonly called "Saddle-backed sheep".  
 1907. *Ovis cowani* Rothschild, Proc. Zool. Soc., London, 1907, p. 238. Mountain chain near Mount Logan, British Columbia. (No such mountain is now known in British Columbia. All sheep in Mount Logan, Yukon region, are white.)  
 1912. *Ovis dalli stonei* Allen, Bull. Amer. Mus. Nat. Hist., 31:28.  
 1915. *Ovis canadensis niger* Millais, The Gun at Home and Abroad, 4:324. Mountains at head of Skeena River, British Columbia.

*Type Locality*. Headwaters of Stikine River, British Columbia, Canada. Altitude, about 6,500 feet. (Type: A.M.N.H., No. 12721.)

*Range*. "The Omineca and Cassiar districts of British Columbia completely north of latitude 56° 30' W. to the summit of the coast range and Lake Atlin, east to the Rocky Mountains, south to the Peace River along the slopes bordering the Nabesche River, Ingenika Range (Haworth, 1917, p. 129), Klappan Range, north in the Cassiar Mountains and adjacent ranges at least as far as the Pelly River but in the northern Cassiar and Pelly Mountains blending into *dalli*. In so far as can be discovered the range of *stonei* neither now nor formerly made contact with that of *canadensis*." (Cowan, 1940, p. 531.) (B.C., Y.T.)

Genus *Oreamnos* Rafinesque. Mountain Goats

1817. *Oreamnos* Rafinesque, Amer. Monthly Magazine, vol. 2, p. 44 (Nov. 1817). Type, *Mazama dorsata* Rafinesque=*Rupicapra americana* Blainville.

**\*Oreamnos americanus americanus** (Blainville). CASCADES MOUNTAIN GOAT. *Chèvre des montagnes Cascades*.

1816. *R[upicapra] americana* Blainville, Bull. Sci. Soc. Philomath., Paris, p. 80.  
 1885. *Mazama montana* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 592 (1885).  
 1912. *Oreamnos americanus americanus* Hollister, Proc. Biol. Soc. Wash., vol. 25, p. 186 (Dec. 24, 1912).

*Type Locality*. Cascade Range, near Columbia River, in Oregon or Washington. (Type specimen not known.)



*Range.* Cascade Mountain region in Washington and southwestern British Columbia\* (Kimsquit\*); present distribution irregular and region of intergradation with *O. a. columbiae* not determined. Sinclair (1904, Calif. Univ. Publ. Amer. Archaeol. and Ethnol., 2 (1): p. 18) reported discovery of bones of mountain goat by John C. Merriam in cave deposits near Mount Shasta in northern California in 1903, and Bailey (1936, Mammals of Oregon, North Amer. Fauna, No. 55, pp. 62-63) states that white goats do not now inhabit Oregon. (B.C.)

**\**Oreamnos americanus columbiae* Hollister.** COLUMBIAN MOUNTAIN GOAT. *Chèvre des montagnes de la Colombie-Britannique nord.*

1904. *Oreamnos montanus columbianus* Allen, Bull. Amer. Mus. Nat. Hist., vol. 20, p. 20 (Feb. 10, 1904). Not *Capra columbiana* Desmolin, 1823.  
1912. *Oreamnos americanus columbiae* Hollister, Proc. Biol. Soc. Wash., vol. 25, p. 186 (Dec. 24, 1912).

*Type Locality.* Shesley Mountains, northern British Columbia, Canada. (Type: A.M.N.H., No. 19838.)

*Range.* High mountains of northwestern British Columbia and southern Yukon (Ida Lake\*, Lake Arkell\*, Lake Bennett\*, Pelly River, head\*), irregular in distribution. Immature specimens from the Mackenzie Mountains (Nahanni region, Glacier Lake in Iron Mountains, 4,500 feet\*) in southwestern part of Mackenzie district, Northwest Territories, are probably referable to this form. Limits of range very imperfectly known. (B.C., N.W.T., Y.T.)

**\**Oreamnos americanus missoulae* (Allen).** MONTANA MOUNTAIN GOAT. *Chèvre des montagnes du Montana.*

1904. *Oreamnos montanus missoulae* Allen, Bull. Amer. Mus. Nat. Hist., vol. 20, p. 20 (Feb. 10, 1904).  
1912. *Oreamnos americanus missoulae* Hollister, Proc. Biol. Soc. Wash., vol. 25, p. 186 (Dec. 24, 1912).

*Type Locality.* Missoula, Missoula county, Montana. (Type: A.M.N.H., No. 19336.)

*Range.* From central Idaho and southern Montana north along the Rocky Mountains and adjacent ranges to western Alberta (Banff, Spray Creek\*; Closson\*, Mount Robson, Bow River, head\*) and eastern British Columbia (Golden\*) nearly to Peace River. (Alta., B.C.)

## INTRODUCED SPECIES

Opinions differ on the question of including "introduced" forms in a faunal list. The European hare (*Lepus europaeus*) is included in the formal list as it was brought to Canada and released in certain areas to provide sport and food, and succeeded in establishing itself and spreading over a considerable territory where it is now common. Old World mice and rats were brought in without design and widely acclimated. Two forms of reindeer (*Rangifer* species), allied to the native caribou, have been imported from northern Europe and Siberia in a semi-domesticated state, and although not actually established as free resident species, numbers have been at large in a feral state for a time, and skeletal remains are left that may be confused with those of the native caribou, and the possibility of a certain amount of interbreeding with native stock of certain regions raises questions that should be considered by scientific zoologists.



**\*Rangifer arcticus asiaticus** Jacobi. NORTHEAST SIBERIAN REINDEER. *Renne de la Siberie nord-est.*

1868. *Rangifer Tarandus* var. *Sibiricus* Murray, Geogr. Distrib. Mamm., p. 334. (In part.) Siberia, Kamtschatka.  
 1909. *Rangifer tarandus sibiricus* Lönnberg, Taxonomic notes about Palearctic reindeer, Arkiv. Zool., vol. 6, No. 4, p. 14 (July 14, 1909). (In part.)  
 1912. *Rangifer tarandus sibiricus* Hollister, New mammals from Canada, Alaska, and Kamchatka, Smiths. Misc. coll., vol. 56, No. 35, p. 7 (Feb. 7, 1912). (In part.)  
 1931. *Rangifer arcticus asiaticus* Jacobi, Das Rentier, Leipzig, p. 85.

*Type Locality.* Kolyma, Siberia, U.S.S.R. (Type: Mus. Leningrad, Buturlin coll., No. 240-1908.)

*Range.* Arctic region of northeastern Siberia from Lena River Valley and New Siberian Islands east to shores of Bering Sea. First introduced into northwestern Alaska in 1891 and at various times until 1902 from Chukchi Peninsula and Gulf of Anadir, a total of 1,280 head, and by 1926 had increased to about 350,000, distributed in 110 herds, all but six of which were along the coasts of Bering Sea and the Arctic Ocean. Reindeer from the Buckland, Alaska, herds, considered to be largely descended from the Anadir stock, were driven across northern Alaska to the Arctic coast region west of Mackenzie River delta in 1933, the main herd crossing Mackenzie River in 1935, when 2,730 animals were turned over to the Canadian Government, and the reindeer industry established just east of the Mackenzie delta and on Richards Island. As the herds increased they were divided and have spread east to lower Anderson River, estimated to number about 8,000 or 9,000 at last report. (Y.T., N.W.T.)

**\*Rangifer tarandus tarandus** (Linnaeus). LAPLAND REINDEER. *Renne du Lapland.*

1758. *Cervus Tarandus* Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 67.  
 1784. *Cervus Tarandus sibiricus* Schreber, Die Säugethiere, vol. 5, tab. 284C. (In part.)  
 1843. *Rangifer Tarandus* Gray, List Spec. Mamm. Brit. Mus., p. 181 (n.n.).  
 1902. *Rangifer pearsoni* Lydekker, Proc. Zool. Soc. London, vol. 2, p. 361, fig. 77.  
 1931. *Rangifer tarandus tarandus* Jacobi, Das Rentier, Leipzig, p. 64.

*Type Locality.* High mountains of Swedish Lapland. Type not designated.

*Range.* Northwestern and northern Norway, northern Sweden, northern Russia, and northwestern Siberia to watershed between Jenissei and Lena Rivers. At least four attempts were made to introduce reindeer from Lapland to Canada—a small unsuccessful shipment to central Yukon about 1899, a herd in Newfoundland brought by Dr. W. T. Grenfell in 1908, a small lot from the Grenfell herd taken to Fort Smith, N.W.T., in 1911, and a herd of 550 at Lake Harbour, southern Baffin Island, in 1921. The reindeer in Yukon, Mackenzie district, and Baffin Island disappeared within a few years from lack of proper care or unsuitable forage conditions. The reindeer in Newfoundland increased from 250 to over 1,200, but dwindled away between 1914 and 1918. A small herd of the survivors were taken to Lobster Bay, Saguenay county, Quebec, in 1918, and a few years later the remainder of the Lobster Bay herd were moved to Anticosti Island in the Gulf of St. Lawrence where they decreased in numbers; only one or two living animals were reported to be still at large on the island in summer of 1945.



## HYPOTHETICAL LIST

Order **Insectivora**Family **TALPIDAE**. Moles

**Neurotrichus gibbsii minor** Dalquest and Burgner. SHREW MOLE.

1941. *Neurotrichus gibbsii minor* Dalquest and Burgner, The Murrelet, vol. 22, No. 1, January-April, 1941, pp. 12-14 (April 30, 1941).

*Type Locality.* University of Washington campus, Seattle, Washington. (Type: M.V.Z., No. 94857.)

*Range.* The lowland region near Puget Sound, Washington.

"Four specimens from Point Grey, British Columbia, are slightly smaller than *gibbsii* from the Cascades, but are considerably larger than *minor*. In foreclaw and cranial characters they are nearer to *gibbsii* than to *minor*.

"Two specimens from Huntingdon, British Columbia, are almost exactly intermediate between *gibbsii* and *minor*. In cranial measurements, however, they are much nearer to *gibbsii*. The measurements given by Jackson (1905, pp. 95-96) for specimens from Sumas (Washington), a few miles from Huntingdon, show that the shrew moles of this region are referable to *gibbsii*."

Family **SORICIDAE**. Shrews

**Sorex alaskanus** Merriam. ALASKA WATER SHREW. *Musaraigne d'eau d'Alaska*.

1900. *Sorex navigator alaskanus* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 18 (March 14, 1900).  
1912. *Neosorex navigator alaskanus* Miller, List North Amer. Land Mamm. in U.S.N.M., 1911, U.S.N.M., Bull. 79, p. 21 (Dec. 31, 1912).  
1928. *Sorex alaskanus* Jackson, North Amer. Fauna, No. 28, p. 189 (July 1928).

*Type Locality.* Point Gustavus, on east side of entrance to Glacier Bay, Alaska. (Type: U.S.N.M., No. 97713.)

*Range.* Based on two specimens from type locality. *S. alaskanus* has never been recorded from Canadian territory, but investigations of the extreme northwestern tip of Glacier Bay and tributaries of lower Alsek River in the triangular tip of extreme northwestern British Columbia and in the southwestern corner of Yukon still remain to be done. (B.C.?, Y.T.?)

**Sorex dispar** Batchelder. BIG-TAILED SHREW. BATCHELDER'S SHREW. *Musaraigne à queue épaisse*.

1896. *Sorex macrurus* Batchelder, Proc. Biol. Soc. Wash., vol. 10, p. 133 (Dec. 8, 1896). (Not of Lahmann, 1822.)  
1911. *Sorex dispar* Batchelder, Proc. Biol. Soc. Wash., vol. 24, p. 97 (May 15, 1911). (Substitute for *macrurus* Batchelder.)

*Type Locality.* Beedes (sometimes called Keene Heights), Essex county, New York. (Type: coll. Charles F. Batchelder, No. 1384.)

*Range.* Adirondack and Catskill Mountains, New York; Mount Graylock, Massachusetts; White Mountains, New Hampshire; and in mountains of Pennsylvania and West Virginia. No Canadian records, but the species should be looked for on tops of some of the Monadnock mountains south of the St. Lawrence River in southern Quebec.

**Microsorex hoyi washingtoni** Jackson. WASHINGTON PIGMY SHREW. *Musaraigne pygmée du Washington*.

1925. *Microsorex hoyi washingtoni* Jackson, Proc. Biol. Soc. Wash., vol. 38, p. 125 (Nov. 13, 1925).

*Type Locality.* Loon Lake, Stevens county, Washington. (Type: U.S.N.M., No. 91007.)

*Range.* "Known only from the type locality" (Jackson, 1928, p. 209).



*M. h. washingtoni* has not been recorded from Canada. It was described from a single specimen taken at Loon Lake, Stevens county, Washington, and Jackson states that "The reddish colour and the small and flattened, but relatively broad skull of *M. h. washingtoni* show the form to be well differentiated." The type locality is about 65 miles south of the British Columbia-Washington International Boundary and about 350 miles from the nearest records of *M. h. hoyi* in British Columbia (Cariboo) and in Alberta (Red Deer River). More intensive collecting in the intervening region may extend the known range of one or both of these shrews. (B.C.?)

## Order Chiroptera. Bats

### Family VESPERTILIONIDAE. Common Bats

**Myotis austroriparius** (Rhoads). RHOADS' BROWN BAT. *Chauve-souris de Rhoads*.

1897. *Vespertilio lucifugus austroriparius* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 227.  
 1897. *Vespertilio gryphus* Rhoads, *ibid.*, p. 157.  
 1928. *Myotis austroriparius* Miller and Allen, Bull. U.S. Nat. Mus., 144, pp. 76-80.

*Type Locality.* Tarpon Springs, Pinellas county, Florida. (Type: Acad. Nat. Sci. Phila., No. 878, Rhoads coll.)

*Range.* Vicinity of Tarpon Springs, Florida; Mitchell, Indiana; Canada? (Canadian record. One doubtful record, 37.4.8.127, British Museum; exact locality unknown.)

(Miller and Allen, 1928, referring to *austroriparius*, state (page 16) "A specimen in the British Museum, collected by Drummond, is labelled 'North America'. It may have come from the interior of Canada." On page 37 in key they give "Florida; Indiana; Saskatchewan?"). (Sask.?)

**Myotis lucifugus carissima** Thomas. YELLOWSTONE BROWN BAT. *Chauve-souris du Yellowstone*.

1899. *Myotis yumanensis saturatus* Merriam, North Amer. Fauna, No. 16, p. 89 (Oct. 28, 1899) (not of Miller, 1897).  
 1916. *Myotis yumanensis altipetens* H. W. Grinnell, Univ. Calif. Publ. Zool., vol. 17, p. 9 (Aug. 23, 1916). Merced Lake, Yosemite National Park, California.  
 1917. *Myotis lucifugus carissima* Cary, North Amer. Fauna, No. 42, p. 43.  
 1918. *Myotis lucifugus altipetens* H. W. Grinnell, Univ. Calif. Publ., vol. 17, p. 263.  
 1919. *Myotis albicinctus* G. M. Allen, Journ. Mamm., vol. 1, p. 2 (Mount Whitney, Tulare county, California).  
 1928. *Myotis lucifugus carissima* Miller and Allen, Bull. U.S. Nat. Mus., No. 144, pp. 50-53.

*Type Locality.* Yellowstone Lake, Yellowstone National Park, Wyoming. (Type: Br. Mus., Nat. Hist., No. 4.4.35.1.)

*Range.* Semi-arid parts of western United States from eastern Washington, Oregon, and the Sierras of California to western Wyoming and southern and eastern Montana. Recorded from Stehekin, Okanogan county, Washington, near the International Boundary of British Columbia, and from Glasgow, on Milk River in northeastern Montana, not far from the Saskatchewan boundary.

**Myotis sodalis** Miller and Allen. EASTERN CAVE BAT. *Chauve-souris des cavernes*.

1928. *Myotis sodalis* Miller and Allen, Bull. U.S. Nat. Mus., No. 144, pp. 130-135.  
 1897. *Myotis lucifugus* Miller, North Amer. Fauna, No. 13, p. 59 (Oct. 16, 1897) (part; specimens from Mammoth cave, Ky.).

*Type Locality.* Wyandotte Cave, Indiana. (M.C.Z., No. 10980.)

*Range.* Eastern United States from the central Mississippi Valley and northern Alabama to the western part of New England.<sup>1</sup>

<sup>1</sup>Not recorded from Canada, although it has been taken in central Vermont (Brandon and Proctor), and from Grosse Isle, Detroit River, southeastern Michigan. This species has been long overlooked on account of its general resemblance to *Myotis lucifugus*, from which it differs in having slightly longer tail, smaller foot, and by the pinkish grey colour and loose texture of the fur.



**Myotis volans interior** Miller. INTERIOR LONG-LEGGED BAT. *Chauve-souris à jambes longues d'intérieur.*

1897. *Myotis lucifugus longicrus* Miller, North Amer. Fauna, No. 13, p. 64 (Oct. 16, 1897) (in part).

1914. *Myotis longicrus interior* Miller, Proc. Biol. Soc. Wash., vol. 27, p. 211 (Oct. 31, 1914).

1928. *Myotis volans interior* Miller and Allen, Bull. U.S. Nat. Mus. No. 144, pp. 142-145.

**Type Locality.** Five miles south of Twining, Taos county, New Mexico. (Type: U.S.N.M., No. 133426.)

**Range.** More arid parts of the range of the species from eastern Washington and Oregon to central and southern Idaho, central and southwestern Montana, western Wyoming, south to Colorado, New Mexico, northern Chihuahua, and southern California. (Not recorded from Canada, but is apt to occur in the drier parts of southern Alberta and Saskatchewan.)

## Order Carnivora

### Family URSIDAE. Bears

**\*Euarctos americanus emmonsii** Dall. EMMONS' BLACK BEAR. GLACIER BEAR. *Ours noir d'Emmons*.<sup>1</sup>

1895. [*Ursus americanus*] var. *emmonsii* Dall, Science, n.s., vol. 2, p. 87 (July 26, 1895).

1896. *Ursus emmonsii* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 82 (April 13, 1896).

1897. *Ursus glacilis* (sic) Kells, Can. Nat. Science News, vol. 1, p. 12 (April 1897). Mount St. Elias, Alaska.

1924. *Euarctos emmonsii* Miller, List North Amer. Recent Mamm., 1923, U.S. Nat. Mus., Bull. 128, p. 91 (March 18, 1924).

1928. *Ursus americanus emmonsii* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, pp. 233-238 (March 2, 1928). (This form was described from the bluish or greyish colour phase known as "Blue Bear" or "Glacier Bear", which is restricted to the glacier region around Yakutat Bay. As it is anatomically no different from the black bears of the surrounding region, Swarth, 1911, considered *emmonsii* as a subspecies of *U. americanus*, and Hall (loc. cit.) after examination of the same material comes to the same conclusion.

**Type Locality.** St. Elias Alps, near Yakutat Bay, Alaska. (No type designated.)

**Range.** Mainland of southern Alaska, south at least to Taku River, intergrading with *U. a. perniger* to northwest of Yakutat Bay (Hubrick's Camp\*, Chitina River, Alaska). One non-typical specimen from Lake Bennett\* 10 miles north of British Columbia boundary, seems to indicate intergradation with *E. a. randi*.

**Euarctos americanus perniger** Allen. KENAI BLACK BEAR. *Ours noir de Kenai*.

1910. *Ursus americanus kenaiensis* Allen, Bull. Amer. Mus. Nat. Hist., vol. 28, p. 6 (Jan. 5, 1910). (Not *U. kenaiensis* Merriam, 1904.)

1910. *Ursus americanus perniger* Allen, Bull. Amer. Mus. Nat. Hist., vol. 28, p. 115 (April 30, 1910). (Substitute for *kenaiensis* Allen.)

1924. *Euarctos americanus perniger* Miller, List North Amer. Recent Mamm., U.S. Nat. Mus., Bull. 128, p. 91 (March 18, 1924).

1928. *Ursus americanus perniger* Hall, Univ. Calif. Publ. Zool., vol. 30, No. 10, p. 235 (March 2, 1928).

**Type Locality.** Homer, Kenai Peninsula, Alaska. (Type: A.M.N.H., No. 17790.)

**Range.** Mainland of southern Alaska from Kenai Peninsula to region of Yakutat Bay, intergrading with *U. a. emmonsii* in region north of St. Elias Alps. (One specimen in Nat. Mus., Canada, No. 5640, Chitina River Valley, Alaska (Mount Logan expedition, 1925), although tentatively referred to *U. a. emmonsii*, shows some resemblance to *U. a. perniger*, but whether the latter form actually occurs in Canadian territory is uncertain.) (B.C., Y.T.)

<sup>1</sup>Named in honour of Lieut. George Thornton Emmons, U.S.N., distinguished as an explorer and scientific investigator in Alaska, who brought out the first specimens of the blue phase of this bear.



*horribilis* group

***Ursus horribilis bairdi*** (Merriam). BAIRD GRIZZLY. *Ours gris de Baird*.<sup>1</sup>

1914. *Ursus bairdi* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 192 (Aug. 13, 1914).

1918. *Ursus horribilis bairdi* Merriam, North Amer. Fauna, No. 41, p. 19 (Feb. 9, 1918).

*Type Locality.* Blue River, Summit county, Colorado. (Type: U.S.N.M., No. 203805.)

*Range.* Southern Rocky Mountain region from San Juan Mountains, southwestern Colorado, northward through Wyoming to Montana, and perhaps to southeastern British Columbia. Probably a mountain animal, whereas its neighbour *horribilis* was a plains species. (Alta., B.C.)

*arizonae* group

***Ursus caurinus*** Merriam. LYNN CANAL GRIZZLY. *Ours gris du canal Lynn*.

1914. *Ursus caurinus* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 187 (Aug. 13, 1914).

*Type Locality.* Berners Bay, east side of Lynn Canal, southeastern Alaska. (Type: U.S.N.M., No. 176591.)

*Range.* Coast of mainland of southeastern Alaska from Chilkat River Valley and Lynn Canal south an unknown distance. There are no records of this species having been taken in Canada. Chilkat River runs a short course from the mountains in the northwestern corner of British Columbia through a strip of Alaska into Lynn Canal, and Taku River and other smaller streams flow into the east side of Lynn Canal from the divide between Alaska and British Columbia, and if *U. caurinus* is not strictly a coastal species it may ascend the rivers for salmon and enter Canadian territory. (B.C., Y.T.)

*planiceps* group

***Ursus orgiloides*** Merriam. ELSEK GRIZZLY. *Ours de la rivière Alsek*.

1918. *Ursus orgiloides* Merriam, North Amer. Fauna, No. 41, p. 46 (Feb. 9, 1918).

*Type Locality.* Italio River, Alaska. (Type: U.S.N.M., No. 223275.)

*Range.* Coast strip southeast of Yakutat Bay. Specimens have been received from near Yakutat village and from Ankow and Anklin Rivers and mouths of Alsek and Italio Rivers. (Not definitely recorded from Canada, but perhaps comes up Alsek River into the extreme northwest corner of British Columbia and southwestern Yukon.) (B.C., Y.T.)

*richardsoni* group

***Ursus phaeonyx*** (Merriam). TANANA GRIZZLY. *Ours gris des montagnes Tananas*.

1904. *Ursus horribilis phaeonyx* Merriam, Proc. Biol. Soc. Wash., vol. 17, p. 154 (Oct. 6, 1904).

1914. (*Ursus*) *phaeonyx* Merriam, Proc. Biol. Soc. Wash., vol. 27, p. 183 (Aug. 13, 1914).

*Type Locality.* Glacier Mountain, Tanana Mountains, Alaska (about 2 miles below source of Comet Creek, near Fortymile Creek, between Yukon and Tanana Rivers). (Type: U.S.N.M., No. 133231.)

*Range.* Tanana Mountains between Tanana and Yukon Rivers (Ketchumstock); not definitely recorded from Yukon.

<sup>1</sup>Named in honour of Spencer Fullerton Baird (1823-1887), former secretary of the Smithsonian Institution and founder of the U.S. National Museum, U.S. Commissioner of Fisheries, a pioneer naturalist in many fields and an important contributor to the knowledge of North American mammals, including special promotion of investigations in arctic and subarctic Canada.



*townsendi* group

**Ursus townsendii** Merriam. TOWNSEND'S BROWN BEAR. *Ours brun de Townsend*.

1916. *Ursus townsendii* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 151 (Sept. 6, 1916).

*Type Locality.* Mainland of southeastern Alaska, probably between Cross Sound and Alsek River delta, but exact locality uncertain. (Type: U.S.N.M., No. 216643.)

*Range.* Coast of southeastern Alaska on west side of St. Elias Range. Some of the coast grizzlies and big brown bears are known to come up the Alsek and possibly other rivers into extreme northwestern British Columbia and southwestern Yukon, but there are no authentic records sufficient to establish specific identity.

*dalli* group

**Ursus dalli** Merriam. DALL'S BROWN BEAR.<sup>1</sup> *Ours brun de Dall*.

1896. *Ursus dalli* Merriam, Proc. Biol. Soc. Wash., vol. 10, p. 71 (April 13, 1896).

*Type Locality.* Yakutat Bay (northwest side), Alaska. (Type: U.S.N.M., No. 75048.)

*Range.* Malaspina glacier and region northwest of Yakutat Bay (Copper River Mountains, Bering Lake); possibly reaches southwestern Yukon in region of Mount Royal.

**Ursus nuchek** Merriam. NUCHEK BROWN BEAR. *Ours brun de la baie Nuchek*.

1916. *Ursus nuchek* Merriam, Proc. Biol. Soc. Wash., vol. 29, p. 146 (Sept. 6, 1916).

*Type Locality.* Head of Nuchek Bay, Hinchinbrook Island, Prince William Sound, Alaska. (Type: U.S.N.M., No. 146459.)

*Range.* Prince William Sound easterly to Mount St. Elias; limits unknown.

## Family CANIDAE. Foxes and Wolves

**Vulpes velox velox** (Say). KIT FOX. *Renard vite*.

1823. [*Canis*] *velox* Say, Long's Exped. Rocky Mts., vol. 1, p. 487.

1851. *Vulpes velox* Audubon and Bachman, Quadr. North Amer., vol. 2, p. 13.

1885. *Vulpes velox* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 610 (1885).

*Type Locality.* South Platte River (in Logan county?), Colorado. (See Cary, North Amer. Fauna, No. 33, p. 175 (Aug. 17, 1911).)

*Range.* Anthony (1928) states that this race is "Found in the Great Plains region from New Mexico north into Saskatchewan, Canada." Seton (1925) without distinguishing races states that "In Manitoba, it (the kit fox) was formerly found in the Pembina Hills and westward to the Souris" and (1909) gave record from Saskatchewan. Bailey (Mamm. North Dakota, 1926) refers all North Dakota records to *V. v. hebes*. The kit fox of any race is almost extinct in Canada, but it is hoped that some old skins and skulls may be found for Museum collections.

## Family MUSTELIDAE. Weasel family

**Mustela macrodon** (Prentiss). SEA MINK. LARGE-TOOTHED MINK. *Vison marin*. *Vison à grandes dents*.

1903. *Lutreola macrodon* Prentiss, Proc. U.S. Nat. Mus., vol. 26, p. 887 (July 6, 1903).

1911. *Lutreola vison antiquus* Loomis, Amer. Journ. Sci., vol. 31, p. 228 (March 1911).  
Flagg Island, Casco Bay, Maine.

1912. *Mustela macrodon* Miller, North Amer. Land Mamm., 1911, p. 101 (Dec. 31, 1912).

*Type Locality.* Shellheaps at Brooklin, Hancock county, Maine. (Type: U.S.N.M., No. 115178.)

*Range.* At present known only from skeletal remains from coast of Maine. According to Hardy (Forest and Stream, vol. 61, p. 125 (Aug. 15, 1903)) the

<sup>1</sup>Named in honour of William Healy Dall (1845-1927), late honorary curator of mollusks in the U.S. National Museum; eminent as a conchologist, and an important contributor to various branches of natural science, particularly with regard to the northwest coast of North America, where he served as a naturalist of the U.S. Telegraph Expedition, in 1866-67; author of "Natural History and Resources of Alaska," 1867, and numerous subsequent publications for nearly 60 years, including sections of scientific report Canadian Arctic Expedition 1913-18.



animal became extinct in Maine about the year 1860. Traditionally said to have been commonly trapped along the coast of the Bay of Fundy in southern New Brunswick, and Charles H. Young of the National Museum was told in 1924 by fishermen of a big sea mink that formerly occurred on the southwestern coast of Nova Scotia. *See also* Seton, *Lives of Game Animals*, vol. 2, pp. 561-564. The skeletal remains show that this species was much larger than any existing species of mink, and its fur was said to be redder and coarser.

Subfamily **Pinnipedia**. Seals and Walruses

Family PHOCIDAE. Hair Seals

Subgenus *Histiophoca* Gill. Ribbon Seals

1873. *Histiophoca* Gill, Amer. Nat., vol. 7, p. 179 (March 1873). Type, *Phoca fasciata* Zimmermann.

**Phoca fasciata** Zimmermann. RIBBON SEAL. *Phoque rubané*.

1783. *Phoca fasciata* Zimmermann, Geogr. Gesch., vol. 3, p. 277.

1885. *Phoca fasciata* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 607 (1885).

*Type Locality*. Kurile Islands, Japan. (Type specimen unknown.)

*Range*. Mostly along Asiatic shores of the north Pacific from Saghalien Island, Kurile Islands, Okhotsk Sea, and Kamtschatka to Bering Sea, north to East Cape and Point Barrow; occasionally taken on the Aleutian Islands, which are usually given as the southern limit of range on the American side, although Captain Scammon (*Marine Mammals*, 1874) gives sight records for California coast. The possibility of the accidental occurrence of this widely ranging and strikingly marked marine species on the British Columbia coast should not be overlooked.

Order **Cetacea**. Whales and Porpoises

Suborder ODONTOCETI. Toothed Cetaceans

Family DELPHINIDAE. Porpoises, Dolphins

**Delphinus bairdii** Dall. COMMON PACIFIC DOLPHIN. *Dauphin commun du Pacifique*.

1873. *Delphinus bairdii* Dall, Proc. California Acad. Sci., vol. 5, p. 12 (Jan. 29, 1873).

1885. *Delphinus delphis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), pp. 588-589 (1885). (In part.)

1936. *Delphinus bairdii* Miller, Proc. Biol. Soc. Wash., vol. 49, pp. 145-146 (Aug. 22, 1936).

*Type Locality*. Cape (now Point) Arguello, Santa Barbara county, California. (Cotypes, not designated by numbers, two females, collected by C. M. Scammon, in 1872, and later lost.)

*Range*. North Pacific Ocean. The U.S.N.M. has skulls from California (Carmel and San Diego) and Lower California (Escondido Bay), and from Korea. Miller (1936, p. 146) states that "In view of the seeming constancy of its unusually slender cranial beak the dolphin to which Dall gave the name *Delphinus bairdii* should be again recognized as a distinct member of the North American fauna. No specimens known from Canadian waters, but scientific collections of whales are few and far between and none of them are complete; this widely ranging species of the north Pacific may be expected to turn up on the British Columbia coast when more attention is paid to the smaller cetaceans that are taken on our coasts.



Genus *Tursiops* Gervais. Bottle-nosed Dolphins

1855. *Tursiops* Gervais, Hist. Nat. Mamm., vol. 2, p. 323. Type, *Delphinus truncatus* Montague. (Proposed as a substitute for *Tursio* Gray, 1843, preoccupied by *Tursio* Wagler, 1830.)

***Tursiops gillii* Dall.** PACIFIC BOTTLE-NOSED DOLPHIN. COWFISH. *Dauphin à gros nez du Pacifique.*

1873. *Tursiops gillii* Dall, Proc. Calif. Acad. Sci., vol. 5, p. 13.

1885. *Tursiops gillii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

*Type Locality.* Monterey, California. (Type: U.S.N.M., No. 13022.)

*Range.* North Pacific Ocean; Monterey, California, and lower California. Probably occurs on the coast of British Columbia, but no definite records are available.

***Tursiops nuuanu* Andrews.** ANDREWS' BOTTLE-NOSED DOLPHIN. *Dauphin à gros nez d'Andrews.*

1911. *Tursiops nuuanu* Andrews, Bull. Amer. Mus. Nat. Hist., vol. 30, p. 233 (Aug. 26, 1911).

*Type Locality.* Pacific Ocean, approximately latitude 12 degrees north, longitude 120 degrees west. Also recorded from Santa Catalina Island, Gulf of California, and San Bartolome Bay, west coast of Lower California, Mexico. (Type: A.M.N.H., No. 13045.)

Scheffer, Victor B., A List of Marine Mammals of the West Coast of North America, The Murrelet, vol. 23, No. 2 (Aug. 14, 1942), states: "Andrews concludes that apparently two species of *Tursiops* occur on the coast of Lower California" (1911, p. 236). Kellogg states that "we do not have sufficient material to show whether or not *Tursiops nuuanu* is separable from *Tursiops gillii*" (1942, corr.).

***Tursiops truncatus* (Montague).** BOTTLE-NOSED DOLPHIN. *Dauphin à gros nez. Tursiops.*

1821. *Delphinus truncatus* Montague, Mem. Wernerian Nat. Hist. Soc., vol. 3, p. 75.

1885. *Tursiops tursio* and *T. erebennus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

1903. *Tursiops truncatus* True, Proc. Acad. Nat. Sci. Phila., p. 314 (July 8, 1903).

*Type Locality.* Totness, Devonshire, England. (Type not known.)

*Range.* Coast of Europe; North Sea to Bay of Biscay; Mediterranean; Gulf of Lyons; Atlantic coast of North America; Maine to Florida; Gulf of Mexico; Texas. Probably occurs on coast of Nova Scotia, but no definite records available.

Genus *Lissodelphis* Gloger. Right Whale Porpoise

1841. *Lissodelphis* Gloger, Gemeinn. Hand-u. Hilfsbuch Naturgesch., vol. 1, p. 169. Type, *Delphinus peronii* Lacépède.

For use of this name in place of *Leucorhampus* Lilljeborg See Palmer, Proc. Biol. Soc. Wash., vol. 13, p. 24 (Jan. 31, 1899).

***Lissodelphis borealis* (Peale).** PACIFIC RIGHT WHALE DOLPHIN. *Dauphin du Pacifique nord.*

1848. *Delphinapterus borealis* Peale, U.S. Expl. Exped., vol. 8, Mamm. and Ornith., p. 35.

1885. *Leucorhampus borealis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

1901. [*Lissodelphis*] *borealis* Elliot, Synops. Mamm. North. Amer., p. 30 (March 1901).

*Type Locality.* Pacific Ocean, latitude 46° 06' 50" N., longitude 134° 5' W. (Type missing; supposed to have been formerly in U.S.N.M.)

*Range.* North Pacific Ocean; California; Japan. Probably occurs on the coast of British Columbia, but no definite records are available.

Genus *Lagenorhynchus* Gray

***Lagenorhynchus obliquidens* Gill.** PACIFIC STRIPED DOLPHIN. PACIFIC STRIPED PORPOISE. *Marsouin rayé du Pacifique.*

1865. *Lagenorhynchus obliquidens* Gill, Proc. Acad. Nat. Sci. Phila., p. 177.

1885. *Lagenorhynchus obliquidens* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

1942. *Lagenorhynchus obliquidens* Scheffer, The Murrelet, vol. 23, No. 2, p. 44 (Aug. 14, 1942).



*Type Locality.* Pacific Ocean, near San Francisco, Calif. (Cotypes: U.S.N.M., Nos. 1961, 1962, and 1963; skulls.)

*Range.* North Pacific Ocean, California, Puget Sound. Specimens from Japan and state of Washington. No Canadian records available, but the species probably occurs on British Columbia coast.

**Lagenorhynchus thicola** Gray. GRAY'S BOTTLE-NOSED WHALE. *Marsouin à gros nez* de Gray.

1849. *Lagenorhynchus thicola* Gray, Proc. Zool. Soc. London, p. 2.

1885. *Lagenorhynchus thicola* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).

*Type Locality.* Said to be western coast of North America. (Br. Mus.)

*Range.* ?West coast of North America. "May possibly have come from seas of Southern Hemisphere" (Kellogg, R., in litt., 1945).

#### Genus *Gramphidelphis* Iredale and Troughton

1933. *Gramphidelphis* Iredale and Troughton, Records Australian Museum, vol. 19, No. 1, p. 31 (Aug. 2, 1933). Type, *Gramphidelphis exilis* Iredale and Troughton. Type locality, Sydney, Australia.

**Gramphidelphis griseus** (Cuvier). RISSO'S DOLPHIN. GRAMPUS. *Dauphin de Risso*. *Grampus gris*.

1812. *Delphinus griseus* Cuvier, Ann. Mus. d'Hist. Nat., Paris, vol. 19, p. 14.

1872. *Grampus griseus* Flower, Trans. Zool. Soc. London, vol. 8, pt. 1, p. 1 (March 1872).

1885. *Grampus griseus* and *G. stearnsii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), pp. 589, 590 (1885).

1931. *Grampus griseus* Troughton (*nec* Cuvier), Proc. Zool. Soc., pt. 1, pp. 565-569, Pl. 1, figs. 1-3.

1933. *Gramphidelphis griseus* Iredale and Troughton, Records Australian Museum, vol. 19, No. 1, p. 31.

*Type Locality.* Brest, France.

*Range.* North Atlantic and North Pacific Oceans, North Sea, Mediterranean, coast of the United States, Cape Cod; Atlantic City, New Jersey; Massachusetts; Cape of Good Hope; California; Japan. Probably occurs along the eastern coasts of Canada but no definite records of specimens taken or determined other than by sight.

#### Genus *Pseudorca* Reinhardt. False Killer

1862. *Pseudorca* Reinhardt, Overs. K. Danske Vidensk. Selsk. Forhandl., Kjøbenhavn, p. 151. Type, *Phocaena crassidens* Owen.

**Pseudorca crassidens** (Owen). FALSE KILLER WHALE. *Petit orque à grandes dents*.

1846. *Phocaena crassidens* Owen, Hist. British Fossil Mammals and Birds, p. 516.

1863. *Pseudorca crassidens* Reinhardt, title page to reprint of article from Overs. K. Danske Vidensk. Selsk. Forhandl., Kjøbenhavn, 1862, pp. 103-152.

1889. *Pseudorca crassidens* True, Rev. Fam. Delphinidae, p. 143.

*Type Locality.* Lincolnshire Fens, England (subfossil). Type: "Now preserved in the Museum of the Stamford Institution" Owen, 1846.

*Range.* Cosmopolitan. (For North American records See Miller, Proc. U.S. Nat. Mus., vol. 57, pp. 205-207 (June 15, 1920).)

North American records given by Miller (1920, op. cit., pp. 205-207) from southern Florida and Lower California. Kellogg (1940, Nat. Geogr. Mag., p. 89) states that "The sporadic appearance in inshore waters during the past 30 years of large schools of False Killer Whales, a species that hitherto has been regarded as rare, is perhaps the most extraordinary happening in the entire history of cetology. It is believed that some of these invasions have coincided with the flooding shoreward of warm ocean currents, which influenced the distribution of fish and other sea life on which the whales feed." No definite Canadian records as yet known.



Genus *Globicephala* Lesson. Blackfish

***Globicephala brachyptera* (Cope).** SHORT-FINNED BLACKFISH. *Epaulard à nageoires courtes.*

1876. *Globicephalus brachypterus* Cope, Proc. Acad. Nat. Sci. Phila., p. 129.  
 1885. *Globiocephalus brachypterus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).  
 1924. *Globicephala brachyptera* Miller, List North Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 128, p. 512 (March 18, 1924).

*Type Locality.* East coast of Delaware Bay, at mouth of Maurice River.  
 Type not designated by number.

*Range.* Atlantic coast of North America from New Jersey to the Gulf of Mexico and the West Indies.

***Globicephala scammonii* (Cope).** SCAMMON'S BLACKFISH. NORTH PACIFIC BLACKFISH. *Epaulard de Scammon. Epaulard du Pacifique nord.*

1869. *Globocephala scammonii* Cope, Proc. Acad. Nat. Sci. Phila., p. 21.  
 1885. *Globocephalus scammoni* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 589 (1885).  
 1924. *Globicephala scammonii* Miller, List North Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 128, p. 512 (March 18, 1924).

*Type Locality.* Coast of Lower California, Mexico, in latitude 31 degrees, land 10 miles distant. (Type: U.S.N.M., No. 9074.)

*Range.* North Pacific Ocean. Scheffer, Victor B., The Murrelet, vol. 23, No. 2 (Aug. 14, 1942), states: "The name 'blackfish' is also commonly applied to the killer whale, *Grampus rectipinna*." Kellogg (1942) states that *scammoni* may quite possibly be a valid form distinct from the Atlantic *ventricosa* (Hunter). Specimens are desired.

Subfamily *Delphinapterinae*. White Whale. Beluga

***Delphinapterus dorofeevi* Barabash and Klumov.** OKHOTSK SEA WHITE WHALE. *Marsouin blanc de la mer Okhotsk.*

1935. *Delphinapterus dorofeevi* Barabash and Klumov, The Pacific Ocean form of white whale. Biulleten' rybnogo Khoziaistvo SSSR (Sea Fishery Economics in USSR), Moscou, number 11, p. 24. (In Russian. New: *Delphinapterus dorofeevi*.)

*Type Locality.* Okhotsk Sea. Types based on studies of 39 skulls in Lab. Marine Mammals (Moscow); in Zool. Mus. First State Univ. (Moscow), and Zool. Inst. Acad. Sci. (Moscow).

*Range.* Recorded only from Okhotsk Sea. See Barabash, I. I., Taxonomic Observations on White Whales (1937, Journ. Mamm., vol. 37, No. 4, pp. 507-509 (Nov. 14, 1937)), for diagnostic characters of skulls of *D. dorofeevi* and *D. freimani* compared with *D. leucas*. The white whales of Okhotsk Sea probably enter the North Pacific Ocean and presumably Bering Sea, and if the species is tenable must be considered as a possible migrant into the seas of western Arctic Canada.

***Delphinapterus freimani* Klumov.** WHITE SEA WHITE WHALE. *Marsouin blanc de la mer Blanche.*

1935. *Delphinapterus freimani* Klumov, S. The new form of white whale, Biulleten' rybnogo Khoziaistvo SSSR (Sea Fishery Economics in USSR), Moscou, No. 7, pp. 26-28, figs. 2. (In Russian. New: *Delphinapterus freimani*.)

*Type Locality.* White Sea, northwestern U.S.S.R. (Type based on series in museums in Moscow, U.S.S.R.)

*Range.* Recorded only from White Sea. The form currently recognized for northwestern Europe and northern North America is *D. leucas* (Pallas), with type locality at mouth of Obi (Ob) River, about 1,000 miles farther east than the type locality of *D. freimani*. The systematic status of the North American white whales is badly in need of revision with adequate material for comparisons.



Family ZIPHIIDAE.<sup>1</sup> Beaked Whales

1851. *Berardius* Duvernoy, Ann. Sci. Nat., Paris, ser. 3, Zool., vol. 15, p. 52. Type, *Berardius arnouxii* Duvernoy.

***Berardius bairdii* Stejneger.** PACIFIC BEAKED WHALE. *Cachalot à bec du Pacifique.*

1883. *Berardius bairdii* Stejneger, Proc. U.S. Nat. Mus., vol. 6, p. 75 (June 22, 1883).  
1885. *Berardius bairdii* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).

*Type Locality.* Bering Island, Commander Islands, Bering Sea. (Type: U.S.N.M., No. 20992.)

*Range.* North Pacific Ocean; Bering Island and St. George Island, Bering Sea, to Kiska Harbour, Alaska, and Centerville Beach, near Ferndale, Humboldt county, California. Two specimens taken in Tokyo Bay, Japan (Andrews, 1912, op. cit., p. 903).

This species may appear at times near the coast of British Columbia, but little is known of its movements, and as a deep-sea feeding form it may make the passage offshore from the Aleutian Islands to the coast of California. Kellogg (1940, correspondence) states that "The 'Bottlenose' from North Pacific is probably a *Berardius bairdii*." See Scheffer, Victor B., A List of the Marine Mammals of the West Coast of North America, The Murrelet, vol. 23, No. 2, p. 44 (Aug. 14, 1942).

Genus *Mesoplodon* Gervais. Beaked Whales

***Mesoplodon bidens* (Sowerby).** SOWERBY'S BEAKED WHALE. *Cachalot à bec de Sowerby.* *Mesoplodon.*

1804. *Physeter bidens* Sowerby, British Miscellany, p. 1.  
1877. *M[esoplodon] bidens* Flower, Proc. Zool. Soc. London, p. 684.  
1885. *Mesoplodon sowerbiensis* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 590 (1885).  
1901. *[Mesoplodon] bidens*, Elliot, Synops. Mamm. North Amer., p. 18 (March 1901).

*Type Locality.* Coast of Elginshire, Scotland. (Type: skeleton in Oxford Museum.)

*Range.* North Atlantic Ocean; northern France to Norway and Sweden; Nantucket Island, Massachusetts. No Canadian records, but pelagic wanderers of this kind are apt to occur off coasts of the Maritime Provinces, and stranded whales should be examined and skulls or other bones should be preserved if possible.

***Mesoplodon europaeus* (Gervais).** EUROPEAN BEAKED WHALE. *Cachalot à bec de l'Europe.*

- 1848-52. *Dioplodon europaeus* Gervais, Zool. et Pal. franc., ed. 1, p. 4.  
1877. *M[esoplodon] europaeus* Flower, Proc. Zool. Soc. London, p. 684.  
1910. *Mesoplodon europaeus* True, Bull. U.S. Nat. Mus., No. 73, p. 11 (Sept. 28, 1910).  
1937. *Mesoplodon europaeus* Raven, Amer. Mus. Novitates, No. 905, pp. 1-16 (Jan. 14, 1935). Describes specimen stranded on Rockaway Beach, Long Island, New York, in 1933, and skull from Middle Key, Florida, in 1935.  
1941. *Mesoplodon europaeus* Ulmer, Proc. Acad. Nat. Sci. Phila., vol. 93, p. 118. Lists the three known records on Atlantic coast of North America.

*Type Locality.* English Channel. (Type: deposited in Museum at Caen, France.)

*Range.* North Atlantic Ocean, English Channel, Florida, New Jersey, New York (Rockaway Beach), Long Island. No Canadian records, but occurrences may be expected on coasts of Maritime Provinces.

***Mesoplodon stejnegeri* True.** STEJNEGER'S BEAKED WHALE. *Cachalot à bec de Stejneger.*

1885. *Mesoplodon stejnegeri* True, Proc. U.S. Nat. Mus., vol. 8, p. 585 (Oct. 19, 1885).  
1910. *Mesoplodon stejnegeri* True, Bull. U.S. Nat. Mus., No. 73, p. 24 (Sept. 28, 1910).

*Type Locality.* Bering Island, Commander Islands, Bering Sea. (Type: U.S.N.M., No. 21112.)

*Range.* North Pacific Ocean; Bering Island and Oregon.

<sup>1</sup>See Andrews, R. C., Science, n.s., vol. 36, p. 903 (1912); and Davidson, M. E. M., Baird's Beaked Whale at Santa Cruz, California, Journ. Mamm., vol. 10, No. 4, pp. 356-357 (Nov. 11, 1929), an individual measuring 36 feet 6 inches in length, detailed skull measurements being also given, as well as records of 10 specimens previously known. No Canadian records.



Order **Rodentia**. Gnawing MammalsSuborder **DUPLICIDENTATA**. Hares, Rabbits, PikasFamily **LEPORIDAE**. Hares, Rabbits

\***Sylvilagus transitionalis** (Bangs). NEW ENGLAND COTTONTAIL. *Lapin brun de la Nouvelle-Angleterre*.

1895. *Lepus sylvaticus transitionalis* Bangs, Proc. Boston Soc. Nat. Hist., vol. 26, p. 405 (Jan. 13, 1895).

1909. *Sylvilagus transitionalis* Nelson, North Amer. Fauna, No. 29, p. 195 (Aug. 31, 1909).

*Type Locality*. Liberty Hill, New London county, Connecticut. (Type: M.C.Z., No. B2407.)

*Range*. "New England States north to Rutland, Vermont, southern New Hampshire, extreme southwestern Maine, and southwest through eastern New York (including southern end of Lake George and Long Island), New Jersey, eastern Pennsylvania, and western Maryland; also along the Alleghenies through West Virginia to Roan Mountain, North Carolina, and Brasstown Bald Mountain in extreme northern Georgia. Zonal range mainly transition." (Miller, 1924, p. 469.) F. L. Osgood, Jr. (1938, Mammals of Vermont, Journ. Mamm., vol. 19, p. 440) states that this species has spread northward rapidly during the past 40 years, and ranges to the Canadian border on the west side of the state and on the east side at least to Montpelier. The species presumably occurs in Mississquoi and Brome counties, Quebec, but no specimens have been actually determined. (P.Q.?)

Suborder **SIMPLICIDENTATA**. Typical RodentsFamily **SCIURIDAE**. Marmots, Squirrels

**Marmota caligata broweri** Hall. NORTHWESTERN ALASKA MARMOT. *Marmotte d'Alaska nord-ouest*.

1934. *Marmota caligata broweri* Hall, Can. Field-Nat., vol. 48, No. 4, April, 1934, p. 58 (April 2, 1934).

*Type Locality*. Point Lay, about 69 degrees 45 minutes north, longitude about 163 degrees west, Arctic coast of northwestern Alaska. (Type: M.V.Z., No. 51675.)

*Range*. Known definitely by three specimens from the type locality and one from Cape Thompson (between Point Hope and northwestern shore of Kotzebue Sound, Alaska. The writer has seen skins of *Marmota caligata* taken by Eskimos in the Endicott (Brooks) Range, Alaska, within one hundred miles of the International Boundary (141 degrees west), and the species is well known to occur in the mountains farther west, and has been reported to occur in the mountains west of the Mackenzie delta in the Northwest Territories and Arctic Yukon. No scientific specimens have been brought out and it is at present impossible to refer them definitely to either *Marmota caligata broweri* or *M. c. caligata*. (N.W.T.?, Y.T.?)

**Citellus osgoodi** (Merriam). YUKON VALLEY GROUND SQUIRREL. *Ecureuil de terre de la vallée Yukon*.

1900. *Spermophilus osgoodi* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 18 (March 14, 1900).

1903. [*Citellus*] *osgoodi* Osgood, Proc. Biol. Soc. Wash., vol. 16, p. 27 (March 19, 1903).

1938. *Citellus osgoodi* Howell, North Amer. Fauna, No. 56, p. 104 (May 18, 1938).

*Type Locality*. Fort Yukon, Alaska. (Type: U.S.N.M., No. 12789/37822.)

*Range*. "The Yukon Valley, from a point about 25 miles above Circle to the Yukon Flats, west of Fort Yukon and possibly to the mouth of the Tanana



(Osgood, 1900, p. 31) (fig. 8). Zonal range: Hudsonian" (Howell, 1938, p. 104). "Specimens examined (Howell, 1938, p. 105) Alaska: Yukon River, 62 (Circle, 1; Fort Yukon, 3; mouth of Porcupine River, 1; 10 miles above Hess Creek, 1; 21 miles above Circle, 55; Yukon Flats, 1." Total number, 62.

**Eutamias minimus pallidus** (Allen). PLAINS CHIPMUNK. *Suisse des plaines*.

1874. *Tamias quadrivittatus* var. *pallidus* Allen, Proc. Boston Soc. Nat. Hist., vol. 16, p. 289.

1922. *Eutamias minimus pallidus* Howell, Journ. Mamm., vol. 3, p. 183 (Aug. 4, 1922).

*Type Locality*. Camp Thorne, near present town of Glendive, Yellowstone River, Dawson county, Montana. (Type: U.S.N.M., No. 11656/38311.)

*Range*. This pale form of *borealis* occurs in the plains region of western United States from northwestern Nebraska, western South Dakota, and Wyoming, north to western North Dakota and eastern Montana. Howell (1929) considered a series referred to *borealis* from Indian Head, Sask., as "approaching *pallidus*". *E. minimus* is rare and local in most parts of southern Alberta and Saskatchewan on account of scarcity of brushy cover; a region of intergradation, where bleached and faded specimens are probably best treated as nearer to *borealis*. (Alta.?, Sask.?)

#### Family CRICETIDAE. Native Mice and Rats

**Reithrodontomys megalotis dychei** Allen. PRAIRIE HARVEST MOUSE. *Souris de la moisson des prairies*.

1895. *Reithrodontomys dychei* Allen, Bull. Amer. Mus. Nat. Hist., vol. 7, p. 120 (May 21, 1895).

1914. *Reithrodontomys megalotis dychei* Howell, North Amer. Fauna, No. 36, p. 30 (June 5, 1914).

*Type Locality*. Lawrence, Douglas county, Kansas. (Type: A.M.N.H., No. 10127/8431.)

*Range*. Greater part of Kansas, Nebraska, Iowa, Missouri, and South Dakota; southern North Dakota; southeastern Montana; eastern Colorado, and eastern Wyoming. There are no Canadian records of any form of harvest mouse on the Canadian prairies, but they may occur as there is no natural barrier to their spread from North Dakota and Montana.

**Peromyscus maniculatus hylaeus** (Osgood). SOUTHERN ALASKA WHITE-FOOTED MOUSE. *Souris à pattes blanches d'Alaska sud*.

1908. *Peromyscus hylaeus* Osgood, Proc. Biol. Soc. Wash., vol. 21, p. 141 (June 9, 1908).

1909. *Peromyscus maniculatus hylaeus* Osgood, North Amer. Fauna, No. 28, p. 53 (April 17, 1909).

*Type Locality*. Hollis, Kasaan Bay, Prince of Wales Island, Alaska. (Type: U.S.N.M., No. 127038.)

*Range*. Islands and coast of southeast Alaska west and northwest of the range of *P. m. macrorhinus*, including Prince of Wales, Kupreanof, Mithof, and Admiralty Islands, and the mainland coast from Lynn Canal to Frederick Sound. Intergradation with *P. m. algidus* takes place in the region of Lynn Canal.

**Clethrionomys occidentalis** (Merriam). PUGET SOUND RED-BACKED MOUSE. *Campagnol à dos roux*.

1890. *Evotomys occidentalis* Merriam, North Amer. Fauna, No. 4, p. 25 (Oct. 8, 1890).

1894. *Evotomys pygmaeus* Rhoads, Proc. Acad. Nat. Sci. Phila., p. 284 (Oct. 1894). (Mouth of Nisqually River, Pierce county, Wash.)

*Type Locality*. Aberdeen, Chehalis county, Washington. (Type: U.S.N.M., No. 17447/24351, ♂ ad., skin and skull.)

*Range*. "Coast and Puget Sound region of Washington and southern British Columbia" (Miller, 1924, p. 404). Bailey (1927, p. 136) listed 19 specimens from northwestern Washington, and 1 from Port Moody, British Columbia, but



no other specimen is on record from Canada, so far as known. Later collections of red-backed mice from southwestern British Columbia have been referred to *C. g. caurinus*, and the status of *C. occidentalis* needs further investigation.

***Microtus longicaudus littoralis* Swarth.** ALASKA LONG-TAILED VOLE. *Campagnol à queue longue d'Alaska.*

1933. *Microtus mordax littoralis* Swarth, Proc. Biol. Soc. Wash., vol. 46, p. 209 (Oct. 26, 1933).  
 1898. *Microtus macrurus* Merriam, Proc. Acad. Nat. Sci. Phila., p. 353 (Oct. 4, 1898). Lake Cushman, Olympic Mountains, Washington. (In part.)  
 1922. *Microtus mordax macrurus* Swarth, Univ. Calif. Publ. Zool., vol. 24, 1922, p. 175.  
 1938. *Microtus longicaudus littoralis* Goldman, Notes on the Voles of the *Microtus longicaudus* group, Journ. Mamm., vol. 19, No. 4, p. 491 (Nov. 14, 1938).

*Type Locality.* Shakan, Prince of Wales Island, Alaska. (Type: M.V.Z., No. 8642.)

*Range.* Mainland coast and most of the islands of southeastern Alaska. On the coast from Yakutat south at least to Bradfield Canal. On most of the islands of the Alexander Archipelago that lie east of Chatham Strait and to the southward. Swarth (1933, pp. 209-210) states that intergradation between *mordax* (i.e., *vellerosus*) and *littoralis* has been traced along the valley of the Stikine. Swarth (1922, p. 178) stated that *M. m. mordax* may be regarded as occurring along the Stikine, at least as far down as a point (Clearwater Creek) some 20 miles from the mouth of the river. This is just below the British Columbia-Alaska boundary line.

**\**Microtus yakutatensis* Merriam.** YAKUTAT TUNDRA MOUSE. *Campagnol de Yakutat.*

1900. *Microtus yakutatensis* Merriam, Proc. Wash. Acad. Sci., vol. 2, p. 22 (March 14, 1900).

*Type Locality.* North shore of Yakutat Bay, Alaska. (Type: U.S.N.M., No. 98005.)

*Range.* Mainland of Alaska from Glacier Bay to Prince William Sound. Not recorded for Canada, but may occur in parts of southwestern Yukon and extreme northwestern triangle of British Columbia in valley of Alsek River. Five specimens in N.M.C. from near head of Chitina River, Alaska, on west side of Mount Logan. (B.C.?; Y.T.?)

**\**Pedomys ochrogaster haydenii* (Baird).** HAYDEN MEADOW MOUSE. *Petit campagnol de Hayden.*

1857. *Arvicola (Pedomys) haydenii* Baird, Mamm. North Amer., p. 543.  
 1895. *Microtus (Pedomys) haydenii* Allen, Bull. Amer. Mus. Nat. Hist., vol. 7, p. 267 (Aug. 21, 1895).  
 1907. *Microtus ochrogaster haydenii* Osgood, Proc. Biol. Soc. Wash., vol. 20, p. 48 (April 18, 1907). "The paler western subspecies should be called *Microtus ochrogaster haydeni*"  
 1941. *Pedomys haydenii* Ellerman, Families and Genera of Living Rodents, vol. 2, p. 621.

*Type Locality.* Fort Pierre, Stanley county, South Dakota. (Type: U.S.N.M., No. 699/1862.)

*Range.* Plains region of western South Dakota, North Dakota west of the Missouri River, Nebraska, Kansas, eastern Colorado and Wyoming, and Transition zone in Montana. (Alta.?)

#### Family MURIDAE. Old World Mice and Rats

***Mus musculus brevirostris* Waterhouse.** SHORT-TAILED HOUSE MOUSE. *Souris commune à queue courte.*

1837. *Mus brevirostris* Waterhouse, Proc. Zool. Soc. London, p. 19.  
 1943. *Mus musculus brevirostris* Schwartz and Schwartz, Journ. Mamm., vol. 24, No. 1, p. 64 (Feb. 20, 1943).

*Type Locality.* Maldonado, Uruguay.

*Range.* Italian peninsula, Mediterranean coast of France, and Iberian peninsula, in the main south of the central mountain range, overlapping with



*M. m. domesticus*, which is found in northern Spain; Mediterranean islands as far east as Crete. Introduced into Asia Minor, some of the Ionian islands, and the coastal towns of north and northwest Africa. Introduced into the Azores, Madeira, Salvages, and Canary Islands, into South and Central America, and the southern part of the United States where its range passes into and overlaps with that of *M. m. domesticus*. No records from Canada, but specimens are apt to be dropped accidentally at any place.

***Cervus canadensis roosevelti* Merriam. ROOSEVELT'S ELK. OLYMPIC ELK. *Cerf de Roosevelt*.**

1827. *C[ervus] occidentalis* Hamilton Smith, Griffith's Cuvier, Animal Kingdom, vol. 4, p. 101. Extreme western North America.  
 1865. *C[ervus] canadensis occidentalis* Blyth, Proc. Zool. Soc. London, 1865, p. 618.  
 1897. *Cervus roosevelti* Merriam, Proc. Biol. Soc. Wash., vol. 11, p. 272 (Dec. 17, 1897).  
 1912. *Cervus canadensis occidentalis* Miller, List North Amer. Recent Mamm., 1911, U.S. Nat. Mus., Bull. 79 (Dec. 31, 1912).  
 1935. *Cervus roosevelti* Bailey, Proc. Biol. Soc. Wash., vol. 48, p. 187 (Nov. 15, 1935). (*Cervus occidentalis* Hamilton Smith, 1827, considered to be a *nomen nudum* that cannot be shown to apply to any North American elk.)  
 1936. *Cervus canadensis roosevelti* Bailey, Mammals of Oregon, North Amer. Fauna, No. 55, p. 81 (June 1936).

*Type Locality.* Mount Elaine, on ridge between heads of Hoh, Elwah, and Soledue Rivers, near Mount Olympus, Clallam county, Washington. (Type: U.S.N.M., No. 91579.)

*Range.* Northeastern California, Oregon and Washington west of the Coast ranges, north to Olympic Peninsula, Washington. Possibly occurred formerly on mainland in southwestern British Columbia. The form found in eastern British Columbia is *C. c. nelsoni*.

#### Family BOVIDAE. Bison, Muskoxen, Sheep, Goats

***Bison bison pennsylvanicus* Shoemaker. EASTERN BUFFALO. EASTERN BISON. *Bison du Pennsylvanie*.**

1915. *Bison americanus pennsylvanicus* Shoemaker, A Pennsylvania Bison Hunt, p. 9.

*Type Locality.* Pennsylvania. (Now extinct.)

*Range.* Formerly ranged nearly to Atlantic coast, from New York to northern Georgia. Seton (1929, Lives of Game Animals, vol. III, p. 658) states that the last herd of this form was wiped out in the White Mountains of Union county, Pennsylvania, in 1799. They are believed to have ranged north to the south shores of Lake Ontario and Lake Erie. We have no known Canadian records, but excavations in southern Ontario, especially in bogs, may some time bring to light skulls, bones, or complete skeletons that will be of great scientific interest.

***Oreamnos kennedyi* Elliot. ALASKA MOUNTAIN GOAT. *Chèvre des montagnes d'Alaska*.**

1900. *Oreamnos* (sic) *kennedyi* Elliot, Field Columb. Mus., publ. 46, zool. ser., vol. 3, p. 3 (June 1900).  
 1912. *Oreamnos kennedyi* Miller, U.S.N.M., Bull. No. 79, p. 397 (Dec. 31, 1912).

*Type Locality.* Mountains at mouth of Copper River, opposite Kayak Island, Alaska. (Type: Chicago Mus. Nat. Hist., number not designated.)

*Range.* Mountains of southeastern Alaska from mouth of Copper River eastward to St. Elias Range. No Canadian specimens referable to this form are available, but goats were said to be abundant on south side of Chitina River opposite Barnard Glacier west of Mount Logan (Lang, 1929, Nat. Mus., Canada, Bull. 56, p. 107), and goats from the Yukon section of St. Elias Range may belong to this form. Specimens are desired from southwestern Yukon, and from the extreme northwest triangle of British Columbia. (B.C.?, Y.T.?)



## LIST OF TYPE LOCALITIES

The type localities mentioned in the foregoing catalogue are here arranged alphabetically under the following general headings: Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Northwest Territories, Ontario, Quebec, Saskatchewan, Yukon, Greenland, Labrador, Newfoundland, and Miscellaneous, the last named being type localities that are too vague to be segregated under modern geographical areas. Under each type locality the names based on specimens collected there are listed alphabetically. Names recognized as valid are given as they now appear in the present catalogue, and those that are regarded as synonyms are left in the form used by the first describer. Listing of synonyms is of use because in later monographs, based on larger collections, synonyms may be revived or reinstated as valid forms, and specimens from their type localities are valuable in any scientific research collection of mammals.

The present Catalogue lists 614 forms recognized as valid, with 55 types in the National Collection. Poole and Schantz (Catalogue of the Type Specimens of Mammals in the United States National Museum, including the Biological Surveys Collection, U.S. Nat. Mus., Bull. 178, pp. xiii, 705, 1942) list 2,824 type specimens of mammals of the world, of which 1,409 are new additions since the publication of the first type list in 1909.<sup>1</sup> Checking up this list, it is found that the U.S. National Museum has the type specimens of 105 forms of Canadian mammals, of which number 15 are synonyms of the forms considered valid at the present time.

Students of mammalogy should bear in mind the value of type specimens. Under modern methods there is only one type designated, and such type specimens are usually in the larger established museums, where the types are given special care, and in some institutions are not loaned. As zoological specimens are usually somewhat fragile, and museums and private collections are subject to destruction, topotypes, specimens taken at the type locality, are extremely useful. They are of particular importance in Canada, where much zoological collecting was done in many regions and the specimens taken to other countries before much systematic work was done here outside of certain local areas.

Topotypes in series are even more to be desired, as a better idea of the typical animal population groups is shown in a series than by an individual specimen, which in some cases may have been selected to show the more distinctive characters rather than the norm of the local population. The following list indicates definite localities from which specimens are very much desired by scientific museums of natural history, and students or other collectors who live in, or visit, any of these areas are urged to make an effort to obtain topotypes of the forms listed.

## ALBERTA

Athabaska River, probably head of:

*Ochotona princeps princeps*

Bow River, mountains on, near Exshaw:

*Ovis canadensis canadensis*

Calgary:

*Vulpes velox hebes*

Canadian National Park (near Banff):

‡*Citellus columbianus albertae* (= *C. c. columbianus*)

Chief Mountain Lake=Waterton Lake, 3½ miles north of the Alberta-Montana International Boundary:

*Eutamias amoenus luteiventris*

Elk (Athabaska) River, head of:

‡*Citellus erythroluteus*=*C. columbianus columbianus*

<sup>1</sup>Lyon, Marcus Ward, Jr., and Osgood, Wilfred Hudson: Catalogue of the Type-specimens of Mammals in the U.S. National Museum, including the Biological Survey Collection; U.S. Nat. Mus. Bull. 62, pp. 325 (1909).



## ALBERTA—Concluded

Henry House, Jasper National Park, foothills of Rocky Mountains:

*Myotis altifrons* (= *Myotis volans longicrus*)

*Myotis lucifugus pernox*

Jackpine River, head of; near Mount Bess, close to British Columbia boundary:

*Ursus dusorgus*

Jasper House:

*Glaucomys sabrinus alpinus*

*Microtus pennsylvanicus drummondii*

*Microtus richardsoni richardsoni*

*Neotoma cinerea drummondii*

*Ursus latifrons*

Medicine Hat, South Saskatchewan River:

*Thomomys talpoides andersoni*

Mount Inglesmaldie, near Banff:

*Ochotona princeps lutescens*

Peace River, near the headwaters of one of the tributaries of, or between there and the Jasper House region:

*Lemmus trimucronatus helvolus*

Rocky Mountains, on headwaters of Athabaska River:

*Ursus canadensis rungiusi*

Smoky River, head of Moose Pass branch of:

*Citellus lateralis tescorum*

*Marmota caligata oxytona*

*Marmota sibila* (= *Marmota caligata oxytona*)

*Rangifer arcticus fortidens*

Rocky Mountains of western Alberta, precise locality unknown:

*Ursus hylodromus*

South Edmonton:

*Thomomys talpoides loringi*

## BRITISH COLUMBIA

Agassiz, lower Fraser Valley:

*Microtus oregoni serpens*

Anarchist Mountain, near Osoyoos-Bridesville summit, about 8 miles east of Osoyoos Lake.  
latitude 49° 08' north, longitude 119° 32' west, altitude 3,500 feet:

*Perognathus laingi* (= *P. parvus laingi*)

Ashcroft:

*Eutamias amoenus affinus*

*Peromyscus maniculatus artemisiae*

Atnarko River, one of the upper forks of Bella Coola River:

*Ursus warburtoni*

Beaver Creek, 15 miles northwest of Alberni, Vancouver Island:

*Peromyscus maniculatus angustus*

Beaverfoot Range, Kootenay district:

*Ursus pulchellus ereunetes*

Bennett Lake, head of (site of Old Bennett City):

*Citellus parryi plesius*

*Peromyscus maniculatus algidus*

*Neotoma cinerea saxamans*

Black Creek, Comox district, east coast of Vancouver Island; altitude 150 feet:

*Sorex palustris brooksi*

Bowen Island, Howe Sound:

*Microtus townsendii cummingi*

Calvert Island, Safety Cove:

*Sorex obscurus calvertensis*

Campbell Lake, Vancouver Island:

*Felis concolor vancouverensis*

Cassiar Mountains:

*Rangifer arcticus osborni*



## BRITISH COLUMBIA—Continued

Chezacut Lake, Chilcotin River:

*Lepus americanus pallidus*

Clearwater Creek, a north branch of Stikine River:

*Ursus hoots*

Coldstream, 3 miles southeast of Vernon, Okanagan Lake:

*Microtus pennsylvanicus funebris* (= *M. p. modestus*)

Columbia Valley:

*Ursus kluane impiger*

Cumshewa Inlet, Moresby Island, Queen Charlotte Islands:

*Sorex obscurus elassodon*

Dease Lake:

*Gulo niediecki* (= *Gulo l. luscus*)

Ducks:

*Neotoma cinerea columbia* (= *N. c. occidentalis*)

*Tamiasciurus hudsonicus streator*

Duncan Station, Vancouver Island:

*Tamiasciurus hudsonicus vancouverensis*

Eastern British Columbia:

*Ursus ophrus*

"Edge of the humid western slope of the Rocky Mountains, somewhere between Kicking Horse Pass and Columbia River":

*Martes americana abietinoides*

Forbidden Plateau, near eastern edge of Strathcona Park, north of Mount Albert Edward, about 17 miles northwest of Comox, Vancouver Island; latitude 49° 42' north, longitude 125° 25' west, altitude about 4,200 feet:

*Peromyscus maniculatus interdictus*

Fort McLaughlin, Hunter Island:

*Sciurus lanuginosus* (= *Tamiasciurus hudsonicus picatus*)

French Creek, Vancouver Island:

*Mustela cicognanii anguinae*

Gawi, west coast of Moresby Island, Queen Charlotte Islands:

*Lutra periclyzomae*

Glacier, Selkirk Range:

*Glaucomys sabrinus latipes*

*Synaptomys borealis chapmani*

Golden Eagle mine, 20 miles south of Alberni, Vancouver Island:

*Martes caurina vancouverensis*

Gold Range:

*Marmota caligata okanagana*

Goldstream, Vancouver Island:

*Sorex vagrans vancouverensis*

Graham Island, Queen Charlotte Islands:

*Rangifer arcticus dawsoni*

Great Central Lake, Vancouver Island:

*Gulo luscus vancouverensis*

Green Mountain (near summit), head of Murphy Creek, about 10 miles north of Rossland; latitude 49° 13' north, longitude 117° 52' west; altitude about 6,000 feet:

*Zapus princeps kootenayensis*

Gribble Island, latitude 53° 25' north, longitude 120° west:

*Euarctos americanus kermodei*

Hells Gate, Liard River:

*Microtus cautus* (= *Microtus longicaudus vellerosus*)

Hope, Roab's Ranch:

† *Aplodontia rufa columbiana* (= *A. r. rainieri*)

*Lepus bairdii cascadiensis* (= *Lepus americanus cascadiensis*)



## BRITISH COLUMBIA—Continued

Huntingdon, Fraser Valley district, just north of International Boundary (49th parallel):

*Mustela erminea fallenda*

Indianpoint Creek, 16 miles northeast of Barkerville; altitude 3,200 feet:

*Castor canadensis sagittatus*

Isaacs Lake, 3,000 feet elevation, Bowron Lake region:

*Canis latrans incolatus*

Itcha Mountains, Chilcotin Plateau, south of Isacha Lake, range 3, Coast district, latitude 52° 45' north, longitude 125° west; altitude 6,500 feet:

*Marmota caligata raceyi*

Jervis Inlet:

*Ursus chelidonias*

*Ursus kwakiutl*

Kamloops, basaltic plateau about 20 miles northwest; altitude, 5,500 feet:

*Phenacomys intermedius intermedius*

*Zapus hudsonius tenellus*

Kettle River, source of:

*Mustela frenata oribasus*

Kimsquit River, Cornice Creek, near head of Dean Inlet, latitude about 52° 24' north, longitude about 127° west; altitude 2,500 feet:

*Phenacomys intermedius laingi*

King Solomon Basin, Vancouver Island:

*Euarctos vancouveri*

Klappan Creek (third south fork, Stikine River):

*Ursus crassodon*

*Ursus tahlitanicus*

Lac La Hache:

*Microtus pennsylvanicus microcephalus* (= *M. p. modestus*)

Level Mountain, northern British Columbia:

*Synaptomys andersoni* (= *Synaptomys borealis dalli*)

Liard River:

‡ *Microtus stonei* (= *Microtus p. drummondii*)

‡ *Microtus vellerosus* (= *Microtus longicaudus vellerosus*)

*Ovis canadensis liardensis* (= *Ovis dalli stonei*)

Little Qualicum River (8 to 9 miles west of Parksville), Vancouver Island:

*Mustela vison evagor*

Lonesome Lake, on Atnarko River, approximately latitude 52° 10' north, longitude 125° 45' west:

*Glaucomyx sabrinus reductus*

*Ursus atnarko*

Lulu Island, mouth of Fraser River:

*Zapus trinotatus trinotatus*

Lund, east shore of Malaspina Inlet:

*Clethrionomys gapperi caurinus*

Masset, Graham Island, Queen Charlotte Islands:

*Euarctos carlottae*

*Martes caurina nesophila*

*Mustela erminea haidarum*

*Myotis californicus caurinus*

*Myotis keenii keenii*

*Peromyscus maniculatus keenii*

Millstone Creek, mouth of, Nanaimo, Vancouver Island:

*Sorex obscurus isolatus*

Monashee Divide, Gold Range:

*Ochotona princeps cuppes*



## BRITISH COLUMBIA—Continued

- Moose Pass, near Mount Robson:  
*Ursus canadensis canadensis*
- Mount Baker Range, Church Mountain, New Westminster district; altitude 7,000 feet:  
*Eutamias amoenus felix*  
*Microtus principalis* (= *Microtus r. richardsoni*)
- Mount Baker Range, near border of Whatcom county, Washington; altitude 6,500 feet:  
*Peromyscus maniculatus oreas*
- Mount Baker Range, Church Mountain, New Westminster district; altitude 6,000 feet:  
*Phenacomys intermedius oramontis*
- Mount Douglas, Vancouver Island:  
*Marmota vancouverensis*
- Mount Revelstoke, 19 miles northeast of Revelstoke; altitude 6,000 feet:  
*Peromyscus maniculatus alpinus*
- Nelson:  
*Clethrionomys gapperi saturatus*
- Okanagan:  
*Glaucomys sabrinus columbiensis*  
*Marmota flaviventris avara*
- Osoyoos Lake:  
*Ondatra zibethica osoyoosensis*
- Pemberton Lake, in edge of humid coast strip:  
*Ursus pervagor*
- Pine Island, Queen Charlotte Strait, north end of Vancouver Island:  
*Peromyscus sitkensis isolatus* (= *P. maniculatus isolatus*)
- Port Hardy, on Queen Charlotte Strait, northeastern end of Vancouver Island:  
*Microtus townsendii laingi*
- Prevost Island, Queen Charlotte Islands:  
*Peromyscus sitkensis prevostensis*  
*Sorex obscurus prevostensis*
- Ptarmigan Hill, near head of Ashnola River, east side of Cascade Range; altitude about 7,000 feet:  
*Ochotona princeps fenisex*
- Quatsino, northwestern part of Vancouver Island:  
*Lutra vancouverensis*
- Quatsino Sound, Vancouver Island:  
*Procyon lotor vancouverensis*
- Raspberry Creek, about 30 miles southeast of Telegraph Creek, northern British Columbia:  
*Tamiasciurus hudsonicus columbiensis*
- Revelstoke:  
*Marmota monax petrensis*
- Revelstoke, near; Illecillewaet watershed, Selkirk Range:  
*Rangifer arcticus montanus*
- Rocky Mountains ("edge of the humid western slope of the Rocky Mountains, somewhere between Kicking Horse Pass and Columbia River"):  
*Martes americana abietinoides*
- Saturna Island, in the Gulf of Georgia, halfway between Victoria and Vancouver City:  
*Peromyscus maniculatus saturatus*
- Sawmill Lake, near Telegraph Creek, northwestern British Columbia:  
*Microtus pennsylvanicus rubidus* (= *M. p. drummondii*)
- Selkirk Mountains, upper Columbia River:  
*Ursus selkirki* (= *Ursus hylodromus*)
- Shesley:  
*Mustela microtus* (= *Mustela erminea richardsonii*)
- Shesley Mountains:  
*Oreamnos americanus columbiae*



## BRITISH COLUMBIA—Continued

## Shesley River:

*Erethizon dorsatum nigrescens*

## Shuswap, Yale district, British Columbia:

*Thomomys talpoides incensus*

## Silver King mine, summit of Toad Mountain, 6 miles south of Nelson, West Kootenay district:

*Thomomys talpoides medius*

## Sicamous, Shuswap Lake:

*Ochotona princeps brooksi*

## Similkameen Mountains:

*Ovis canadensis similkameenensis* (= *O. c. californiana*)

## Sixmile Creek (Stevenson Creek), southwest of Princeton, on Hope-Princeton trail, east slope of Cascade Range, latitude 49° 23' north, longitude 120° 25' west; altitude about 2,400 feet:

*Synaptomys borealis artemisiae*

## Skeena River, mouth of:

*Peromyscus maniculatus macrorhinus*

## Skeena River, mountains at head of:

*Ovis canadensis nigra* (= *O. d. stonei*)

## Smythe Island, Bardswell group:

*Sorex obscurus insularis*

## Southern British Columbia:

*Perognathus parvus lordi*

## Stikine River, headwaters of:

*Ovis dalli stonei*

## Stuart Lake, near headwaters of Fraser River:

*Lutra canadensis evera**Martes pennanti columbiana**Vulpes fulva abietorum*

## Sumas:

*Mephitis occidentalis spissigrada**Mustela vison energumenos*

## Tahsis Canal, Nootka Sound, Vancouver Island:

*Canis lupus crassodon*

## Tatlatui Lake, near head of Skeena River:

*Ursus stikeenensis*

## Telegraph Creek:

*Phenacomys constablei* (= *Phenacomys i. intermedius*)*Zapus princeps saltator*

## Texada Island, Strait of Georgia:

*Peromyscus maniculatus georgiensis**Sorex obscurus mixtus*

## Vancouver Island, Duncan Station:

*Tamiasciurus hudsonicus vancouverensis*

## Vancouver Island, Goldstream:

*Sorex vagrans vancouverensis*

## Vancouver Island, Mount Douglas:

*Marmota vancouverensis*

## Vancouver Island, Nanaimo, mouth of Millstone Creek:

*Sorex obscurus isolatus*

## Vancouver Island, Victoria, Beacon Hill Park:

*Microtus townsendii tetramerus*

## Vancouver Island; no definite type locality:

*Phoca richardii richardii**Castor canadensis leucodonta*



## BRITISH COLUMBIA—Concluded

## Vernon:

*Lepus americanus columbiensis*

## Wistaria, north side of Ootsa Lake, Coast district:

*Canis lupus columbianus*

## Yellowhead (or Cowdung) Lake; altitude 3,700 feet:

*Eutamias amoenus ludibundus*

## MANITOBA

## Churchill, mouth of Churchill River, west shore of Hudson Bay:

*Dicrostonyx groenlandicus richardsoni**Fiber zibethicus hudsonius* (= *Ondatra zibethica alba*)

## Echimamish River (near Painted Stone Portage):

*Mustela vison lacustris*

## Hubbard Point, west coast of Hudson Bay, about 75 miles north of Churchill:

*Lepus arcticus canus* (= *Lepus a. labradorius*)

## Hudson Bay; probably vicinity of Churchill, as specimens have been recorded there:

*Microtus xanthognathus*

## Portage la Prairie:

*Glaucomys sabrinus canescens*

## Robinson Portage, upper Hayes River about 35 miles southwest of Oxford Lake, about latitude 54° 30' north, longitude 96° west:

*Microsorex hoyi alnorum*

## Riding Mountain National Park, near Swanson Creek, in middle of sec. 34, tp. 19, rge. 17, about 10 miles east of Wasagaming; altitude 2,016 feet:

*Phenacomys ungava soperi*

## Riding Mountain National Park, 2½ miles northwest of Lake Audy; altitude 1,740 feet:

*Sorex obscurus soperi*

## Seal and Churchill Rivers, between:

*Ovibos moschatus moschatus*

## Shamattawa River, a tributary of Hayes River, southwest of Hudson Bay:

† *Sorex belli* (= *Sorex arcticus arcticus*)

## Manitoba and eastern Saskatchewan; no exact locality:

*Cervus canadensis manitobensis*

## Thicket Portage, Mile 165, Hudson Bay Railway:

*Synaptomys borealis smithii*

## Turtle Mountains, Max Lake:

*Blarina brevicauda manitobensis*

## NEW BRUNSWICK

## Eastern Canada ("Specimens from eastern New Brunswick assumed to be typical"):

*Ondatra zibethica zibethica*

## Grand Harbour, Grand Manan Island:

*Peromyscus maniculatus argentatus*

## Nipisiquit River:

*Castor canadensis acadicus*

## Restigouche River:

*Napaeozapus insignis insignis*

## Trousers Lake:

*Evotomys fuscodorsalis* (= *Clethrionomys gapperi*, in dusky colour phase)

## NOVA SCOTIA

## Bear River, 15 miles back of:

*Lynx gigas*

## Digby:

*Lepus americanus struthopus**Microtus pennsylvanicus acadicus**Sorex palustris gloveralleni**Vulpes fulva rubricosa*



NOVA SCOTIA—*Concluded*

Frizzleton, Inverness county, Cape Breton Island:

*Glaucomys sabrinus gouldi*

Halifax, Halifax county:

*Myotis keenii septentrionalis*

*Sorex cinereus acadicus*

James River:

*Peromyscus maniculatus abietorus*

*Sorex fumeus umbrosus*

Wolfville, Kings county:

*Blarina brevicauda pallida*

*Clethrionomys gapperi rufescens*

*Condylura cristata nigra*

*Peromyscus leucopus caudatus*

*Sorex arcticus maritimensis*

No particular locality designated:

*Zapus hudsonicus acadicus*

## NORTHWEST TERRITORIES

*Franklin District*

Banks Island, southwestern part of, Cape Kellett, latitude about 72° north, longitude 125° west:

*Canis lupus bernardi*

Baffin Island, west coast near mouth of Hantzsch River, east side of Foxe Basin, latitude about 67° north, longitude 24° west:

*Canis lupus manningi*

Baffin Island, eastern end of Nettilling Lake, near mouth of Takuirbing River, latitude 66° 16' north, longitude 74° 33' 36" west; altitude about 85 feet above sea-level:

*Phoca hispida soperi*

Buchanan Bay, Ellesmere Island, about 79° north:

*Lepus arcticus monstrabilis*

Bylot Island, Possession Bay, latitude 73° 37' north:

*Lepus glacialis* (= *Lepus a. arcticus*)

Discovery Bay, Ellesmere Island, northeastern part, about 82° north (not Greenland):

*Putorius audax* (= *Mustela erminea arctica*)

Ellesmere Island, latitude 72° north:

*Rangifer pearyi*

Melville Island:

*Canis lupus arctos*

*Ovibos moschatus melvillensis* (= *O. m. wardi*)

Melville Peninsula, Lyon Inlet, Five Hawser Bay:

*Citellus parryi parryi*

Victoria Island, southeastern point of, DeHaven Point, west side of Victoria Strait, latitude about 69° north, longitude about 101° 30' west:

*Dicrostonyx groenlandicus kilangmiutak*

*Keewatin District*

Schultz Lake, head of:

*Canis lupus hudsonicus*

Southampton Island, Coral Inlet:

*Mustela erminea semplei*

Thlewiaza River, mouth of, about 50 miles south of Cape Eskimo, near Manitoba-Northwest Territories boundary:

*Microtus pennsylvanicus aphorodemus*

Wager River, head of:

*Ovibos moschatus niphoecus*



NORTHWEST TERRITORIES—*Continued**Mackenzie District*

Anderson River, 50 miles below Old Fort Anderson:

*Ursus macfarlani*

Baillie Cove, Arctic Sound, near mouth of Hood River, west side of Bathurst Inlet:

*Ursus richardsoni*

Bathurst Inlet, Imnaruit, west of Kater Point, latitude 67° 44' 20" north, longitude 109° 04' 03" west:

*Canis lupus mackenzii*

Cape Barrow, Coronation Gulf, Mackenzie district, latitude 67° 59' 32" north, longitude 110° 06' 15" west, near sea-level:

*Lepus arcticus andersoni*

Cockburn Point, Dolphin and Union Strait, latitude 68° 55' 29" north, longitude about 115° 10' west:

*Phoca hispida beaufortiana*

Dease River, east branch of, near Great Bear Lake:

*Ursus andersoni*

Fort Anderson, near mouth of Anderson River:

*Lepus americanus macfarlani*

*Microtus operarius macfarlani*

Fort Enterprise, about 150 miles north of Fort Rae, Great Slave Lake:

*Rangifer arcticus arcticus*

Fort Franklin, Great Bear Lake, west end, near outlet into Bear River:

*Mustela richardsonii* (= *Mustela erminea richardsonii*)

*Synaptomys borealis borealis*

Fort Smith, Slave River, near the Northwest Territories-Alberta boundary, latitude 60° north:

*Clethrionomys gapperi athabasca*

*Phenacomys ungava mackenzii*

Good Hope, near, Lower Mackenzie region:

*Citellus parryi kennicottii* (= *C. p. parryi*)

Great Slave Lake:

*Ovibos moschatus mackenzianus* (= *O. m. moschatus*)

Liard, on Liard River, about 25 miles from N.W.T.-Yukon-B.C. corner:

*Eutamias minimus borealis*

*Sorex sphagnicola* (= *S. a. arcticus*)

Little Keele River, near headwaters, 82 miles west of Mackenzie River, on Canol Road; altitude 5,500 feet:

*Microtus andersoni*

Lower Mackenzie River district, toward Arctic Ocean, exact locality unknown:

*Martes boria* (= *Martes americana actiosa*)

Mackenzie Delta, west branch, opposite Black Mountain:

‡ *Ursus russelli* (= *Ursus internationalis russelli*)

McTavish Bay, southeast end, Great Bear Lake (on canoe route from Fort Hardisty):

*Lutra canadensis preblei*

Point Lake, near head of Coppermine River, latitude about 65° north, longitude 113° west:

*Lemmus trimucronatus trimucronatus*

Rendezvous Lake, northeast of Old Fort Anderson, between lower part of Anderson and Horton Rivers:

*Vetularctos inopinatus* (= *Ursus inopinatus*)

Rae, near, Trout Rock, Great Slave Lake:

*Synaptomys (Mictomys) bullatus* (= *Synaptomys borealis borealis*)

Resolution, Fort, within 50 miles southwest of:

*Bison bison athabasca*

Simpson, Fort, type locality indeterminable, but name restricted by Miller (1912, p. 4) to form occurring at this place:

*Canis lupus occidentalis*



## NORTHWEST TERRITORIES—Concluded

## Mackenzie District—Concluded

Simpson, Fort, at junction of Mackenzie and Liard Rivers:

*Peromyscus maniculatus borealis*  
*Putorius arcticus imperii* (= *Mustela erminea richardsonii*)  
*Tamiasciurus hudsonicus preblei*

South Nahanni River, latitude about 62° north, longitude about 126° west:

*Euarctos hunteri*

## ONTARIO

Algonquin Park, Smoke Lake:

*Napaeozapus insignis algonquinensis*

Kapuskasing, on Kapuskasing River, about 64 miles west of Cochrane:

*Clethrionomys gapperi hudsonius*

Lake Superior, eastern shore, or mouth of Montreal River:

*Eutamias minimus neglectus*

Pancake Bay (Batchawana Bay), southeastern end of Lake Superior, Algoma district, about 40 miles northwest of Sault Ste. Marie:

*Zapus hudsonius ontarioensis*

Penetanguishene, Georgian Bay:

*Tamias striatus lysteri*

Peninsula Harbour, north shore of Lake Superior:

*Napaeozapus insignis abietorum*  
*Peromyscus canadensis umbrinus* (= *Peromyscus maniculatus maniculatus*)

Severn River, mouth of, southwest side of Hudson Bay:

*Glaucomyss sabrinus sabrinus*  
*Lepus americanus americanus*  
*Sorex arcticus arcticus*  
*Sorex cinereus cinereus*  
*Tamiasciurus hudsonicus hudsonicus*  
*Zapus hudsonius hudsonius*

York [Toronto] and Lake Simcoe, between:

*Blarina brevicauda talpoides*  
*Clethrionomys gapperi gapperi*  
*Sciurus carolinensis leucotis*

## QUEBEC

Anticosti Island, Foxe Bay, at eastern end of:

*Peromyscus maniculatus anticostiensis*

Berry Mountain Camp, at junction of Berry Mountain Brook and Grand Caspédia River, Matane county; altitude 1,500 feet:

*Clethrionomys gapperi gaspeanus*  
*Glaucomyss sabrinus goodwini*

Berry Mountain Brook, upper waters, near Federal Zinc and Lead mine, Gaspé county; altitude about 1,500 feet:

*Napaeozapus insignis gaspensis*

Fort Chimo, Ungava district, about 30 miles south of tip of Ungava Bay:

*Alopex lagopus ungava*  
*Canis lupus labradorius*  
*Clethrionomys gapperi ungava*  
*Lepus arcticus labradorius*  
*Lutra canadensis chimo*  
*Microtus pennsylvanicus labradorius*  
*Phenacomys latimanus* (= *Phenacomys u. ungava*)  
*Phenacomys ungava ungava*  
*Synaptomys borealis innuitus*

Godbout, Saguenay county, north shore of Gulf of St. Lawrence:

*Phenacomys celatus* (= *Phenacomys u. ungava*)

Kelly's Camp, Berry Mountain Brook, near head of Grand Caspédia River, Gaspé county; altitude about 1,600 feet:

*Blarina brevicauda angusta*



## QUEBEC—Concluded

Lac Marchant, near Moisie Bay, Saguenay county, north shore of Gulf of St. Lawrence:  
*Tamiasciurus hudsonicus laurentianus*

Lake Edward:

*Microtus pennsylvanicus fontigenus*  
*Synaptomys fatuus* (= *Synaptomys c. cooperi*)

Lower Seal Lake, about 90 miles east of Richmond Gulf, Hudson Bay, latitude 56° 30' north, longitude 74° 30' west; altitude 800 to 860 feet:

*Phoca vitulina mellonae*

Mistassini Lake, Mistassini district, about 215 miles east of Rupert House:

*Mustela vison lowii*

Mount Albert, north side of, Gaspé county, Gaspé Peninsula; altitude 2,000 feet:

*Sorex gaspensis*

Percé, Gaspé county:

*Marmota monax johnsoni*

Pigou River on north shore of Gulf of St. Lawrence, Saguenay county:

*Peromyscus maniculatus plumbeus*

Pleasant Bay, Grindstone Island, Magdalen Islands:

*Peromyscus maniculatus eremus*

Quebec City:

*Zapus hudsonius canadensis*  
*Marmota monax canadensis*

Trout Lake, near Moisie Bay, north shore of Gulf of St. Lawrence, Saguenay county:

*Napaeozapus insignis saguenayensis*

Ungava Bay:

*Thalarcos maritimus ungavensis*

Waswanipi Lake (Woswonaby Post, Hudson's Bay Company), Abitibi district, about 180 miles southeast of intersection of Quebec-Ontario provincial boundary with James Bay:

*Tamiasciurus hudsonicus ungavensis*

## SASKATCHEWAN

Carlton House (now Carlton), southwest of Prince Albert:

*Arctomys hoodii* (= *Citellus tridecemlineatus hoodii*)  
*Citellus franklinii*  
*Citellus richardsonii*  
*Mustela frenata longicauda*  
*Thomomys talpoides talpoides*

Cumberland House, on Saskatchewan River about 35 miles northwest of The Pas, Manitoba, and about 15 miles west of the present Manitoba-Saskatchewan interprovincial boundary, latitude 54° north, longitude 101° 40' west:

*Canis Lupus*—*Griseus* (= *Canis lupus knightii*)  
*Martes americana abieticola*  
*Ondatra zibethica alba*

Osler:

*Mustela rixosa rixosa*

Plains of the Saskatchewan (probably near Carlton House):

*Lepus townsendii campanius*  
*Mephitis mephitis hudsonica*

Unknown, probably plains of Saskatchewan:

*Sorex richardsonii* (= *S. arcticus arcticus*)

Wingard, near Carlton House:

*Zapus princeps minor*

## YUKON

Alaska-Yukon International Boundary, about 50 miles south of Arctic coast, latitude 69° 00' 30" north, longitude 141° west:

*Ursus internationalis internationalis*

Camp Davidson, Yukon River, near Alaska-Yukon boundary:

*Glaucomys sabrinus yukonensis*



YUKON—*Concluded*

Caribou Crossing, between Lake Bennett and Lake Tagish:

*Lepus saliens* (= *Lepus americanus macfarlanei*)

Champagne Landing, southwestern Yukon:

*Ursus canadensis sagittalis*

Dawson City:

*Ovis fannini* (= *Ovis dalli stonei*)

Donjek River, a tributary of White River, southwestern Yukon:

*Ursus pallasi*

Finlayson River, a northern source of Liard River, latitude 61° 30' north, longitude 129° 30' west:

*Clethrionomys dawsoni dawsoni*

Ketza Divide, Pelly Mountains:

*Ursus pellyensis*

Kletson Creek, a tributary of White River, 4 miles east of the Alaska-Yukon boundary:

‡ *Rangifer mcguirei* (= *Rangifer arcticus stonei*)

Lake Laberge:

*Eutamias minimus caniceps*

Lake March:

*Ondatra zibethica spatulata*

Liard River, upper, near British Columbia boundary:

*Ursus oribasus*

Macmillan River, upper, northern tributary of Pelly River:

*Ursus crassus*

McConnell River, a northern tributary of Nisutlin River:

*Ursus kluane kluane*

Ogilvie Mountains, north of Dawson:

*Rangifer arcticus ogilvyensis* (= *R. a. stonei*)

Ross River, a northern tributary of Pelly River, in eastern Yukon:

*Ursus pulchellus pulchellus*

Sheldon Mountain, Canol Road, Mile 222, latitude 62° 30' north, longitude 131° west; altitude about 4,000 feet:

*Euarctos randi*

Tepee Lake, near head of Harris Creek, north slope of St. Elias Range, about 21 miles east of Alaska-Yukon International Boundary, about latitude 61° 35' north, longitude 140° 22' west; above timber-line:

*Microtus (Stenocranius) cantator*

## GREENLAND

Cape York, on Baffin Bay, northwest Greenland:

*Canis lupus orion*

Clavering Island, south side, east Greenland:

*Lepus arcticus persimilis* (= *L. a. groenlandicus*)

East Greenland:

*Ovibos moschatus wardi*

*Thalarctos eogroenlandicus* (= *T. m. maritimus*)

Gap Valley, 7½ miles northeast of Cape Brevoort, latitude 82° north, longitude 59° 20' west, northwestern Greenland:

*Mustela erminea polaris*

Greenland and Labrador, coasts of:

*Phoca hispida hispida*

Greenland and Newfoundland:

*Phoca groenlandica*

Greenland seas:

*Balaena mysticetus*



GREENLAND—*Concluded*

Jameson Land, east Greenland, about latitude 71° north:

*Dicrostonyx groenlandicus groenlandicus*

Julianehaab, south Greenland, latitude 61° 20' north, longitude about 46° west:

*Lepus arcticus porsildi*

Robertson Bay, northwestern Greenland:

*Lepus arcticus groenlandicus*

Southern Greenland, Iceland, and Scotland, coasts of:

*Erignathus barbatus barbatus*

Southern Greenland and Newfoundland:

*Cystophora cristata*

No exact type locality designated:

*Alopex lagopus groenlandicus*

*Halichoerus grypus*

*Rangifer tarandus groenlandicus*

## LABRADOR

Black Bay, Strait of Belle Isle:

*Marmota monax ignava*

*Microtus chrotorrhinus rarus*

*Sorex cinereus miscix*

Hamilton Inlet:

*Clethrionomys gapperi proteus*

*Microtus pennsylvanicus enixus*

Hamilton River, 5 miles above Grand Falls:

*Castor canadensis labradorensis*

L'Anse au Loup, Strait of Belle Isle:

*Erethizon dorsatum picinum*

*Synaptomys borealis medioximus*

*Vulpes fulva bangsi*

Makkovik:

*Glaucomys sabrinus makkovikensis*

Moravian Settlements:

*Peromyscus maniculatus maniculatus*

Nachvak, 30 miles north of:

*Rangifer caboti*

Okkak:

*Martes americana brumalis*

*Thalarctos labradorensis*

*Ursus (Euarctos) sornborgeri* (= *E. a. americanus*)

Red Bay, Strait of Belle Isle:

*Sorex palustris labradorensis*

Rigolet, Hamilton Inlet:

*Ondatra zibethica aquilonia*

*Phenacomys ungava crassus*

*Zapus hudsonius ladas*

No definite type locality designated:

*Dicrostonyx hudsonius*

*Hesperomys arcticus* (= *Peromyscus m. maniculatus*)

*Hesperomys bairdii* (= *Peromyscus m. maniculatus*)

*Tarandus rangifer labradorensis* (= *Rangifer caboti*)

## NEWFOUNDLAND

Bay St. George:

*Castor caecator*

*Lutra degener*

*Martes atrata*

*Mustela mortigena* (= *Mustela erminea richardsonii*)

*Vulpes fulva deletrix*



## NEWFOUNDLAND—Concluded

## Codroy:

*Lepus arcticus bangsii*  
*Lynx subsolanus*  
*Microtus pennsylvanicus terranovae*  
*Ondatra obscura*  
*Rangifer caribou terraenovae*

## No definite type locality designated:

*Canis lupus beothucus*  
*Gulo auduboni* (= *Gulo luscus luscus*)

## Newfoundland and Labrador, no definite type locality:

*Phoca hispida hispida*

## Newfoundland and Greenland, no definite type localities:

*Cystophora cristata*  
*Phoca groenlandica*

## MISCELLANEOUS

## Eastern Canada; no definite type locality designated:

*Canis lupus lycaon*  
*Castor canadensis canadensis*  
*Cervus canadensis canadensis*  
*Erethizon dorsatum dorsatum*  
*Lutra canadensis canadensis*  
*Lynx canadensis canadensis*  
*Martes pennanti pennanti*  
*Mephitis mephitis mephitis*  
*Ondatra zibethica zibethica*  
*Rangifer caribou caribou*

## Hudson Bay:

*Citellus parryi phaeognathus* (= *C. p. parryi*)  
*Gulo luscus luscus*  
*Microtus xanthognathus*  
*Procyon hudsonicus* (= *Procyon lotor lotor*)  
*Zapus hudsonius hudsonius*

## Hudson Bay, southwestern shores of:

*Rangifer caribou sylvestris*

## Hudson Bay and Labrador:

*Taxidea taxus taxus*

## Hudson Bay to the Rocky Mountains, marshy places:

*Sorex palustris palustris*

## No definite type locality designated:

*Tarandus caribou keewatinensis* (= *Rangifer c. sylvestris*)

## ADDENDUM

Genus *Cryptotis* Pomel<sup>1</sup>. Little Short-tailed Shrews

1848. *Cryptotis* Pomel, Arch. Sci. Phys. et Nat. Genève, vol. 9, p. 249 (Nov., 1848). Type, *Sorex cinereus* Bachman = *Sorex parvus* Say.

\**Cryptotis parva* (Say). LITTLE SHORT-TAILED SHREW. *Petite musaraigne à queue courte*.

1823. *Sorex parvus* Say, Long's Exped. Rocky Mts., vol. 1, p. 163.

1885. *Blarina cinerea* and *Sorex parvus* True, Proc. U.S. Nat. Mus., vol. 7 (1884), p. 606 (1885).

1912. *Cryptotis parva* Miller, North Amer. Land Mamm. 1911, p. 24 (Dec. 31, 1912).

*Type Locality.* West bank of Missouri River, near Blair, formerly Engineer Cantonment, 3 miles above mouth of Boyer River, Washington county, Nebraska. (Type specimen not known.)

*Range.* Eastern United States from Texas and eastern Nebraska to southern Michigan, western New York, and southern Ontario, east to the Atlantic coast from Staten Island southward. The Canadian status of this species rests upon four adults and three young taken on Long Point, Norfolk county, Ontario, on north shore of Lake Erie, in 1927, by a party from the Royal Ontario Museum of Zoology (Snyder, L. L., Journ. Mamm., 10:1, 1929, pp. 79-80). (Ont.)

<sup>1</sup>Revised by Merriam, under the name *Blarina*, North Amer. Fauna, No. 10, pp. 16-31 (Dec. 31, 1895).







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